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Oral Presentations

\textbf{Dendritic cell based immunotherapy in solid tumours}

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In the treatment of cancer great expectations rest on novel concepts of immuno-oncology. Various concepts for harnessing the immune systems power in controlling cancer cells were developed over the last two to three decades. Three categories of therapeutic modalities may be distinguished: (i) adoptive cancer immune therapy, the latest of which are chimeric antigen-receptor T-cells; (ii) immune modulatory approaches, the most prominent being immune checkpoint inhibitors; and (iii) cancer vaccine technologies, such as the use of tumour antigen-charged dendritic cells (DC).

We focused on the latter approach. A DC-based cancer immunotherapy method was developed that aimed to stick as closely as possible to the physiological initiation of an immune response. The concept was investigated in a phase I clinical trial for the treatment of bone and soft tissue sarcoma; and in a randomised phase II clinical trial aimed at treating glioblastoma multiforme. No conclusive evidence regarding the efficacy of our DC cancer vaccination approach was generated. However, several lessons learned during our clinical trials that might enhance the chances for developing a successful cancer vaccine in future trials. A promising approach in immuno-oncology will most likely be a combination of various approaches. Currently, first clinical trials investigate the combination of cancer vaccines with immune checkpoint inhibitors.

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\textbf{Hypermetabolic state leading to Wernicke’s Encephalopathy: An under diagnosed phenomenon?}

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Introduction: We describe an unusual presentation of the well-known condition, Wernicke’s encephalopathy (WE). There have only been a small number of documented cases in the literature that identify hyperthyroidism as being a causative factor for WE. It is reported that up to 80\% of WE cases may in fact be missed and it is therefore possible that patients with high metabolic states may have unrecognised WE. This can result in permanent cognitive decline seen post-acute illness. Although early identification and treatment of WE can sometimes successfully reverse symptoms, mortality rates are still relatively high, as was seen in this case.

Case presentation: A 68-year-old male, independent and living alone, presented to A&E with increased confusion and general decline over two months. History was almost exclusively sought from collateral family accounts. He had experienced vomiting, weight loss (15kg) and was found to be uncompliant with carbimazole treatment started one month ago for Graves Disease (FT4 > 100, TSH < 0.02). His past medical history only included asthma and hypercholesterolaemia. On examination atrial fibrillation was noted (96bpm), GCS 14/15, with normal other vitals. He had a fine bilateral upper-limb tremor but normal power in all limbs. No other systemic signs of hyperthyroidism.

Results and conclusions: Carbimazole (20mg daily) was restarted, yet over the next two days his cognition failed to improve. CT head was largely normal. A working diagnosis of confusion, secondary to stroke, secondary to AF was therefore considered. MRI identified possible ischaemic changes in the midbrain and thalamic regions, therefore aspirin for ischaemic stroke was prescribed. Despite this, the patient suddenly died the next morning. Upon review of the MRI by a specialist neuroradiologist, they noted high signal surrounding the third ventricle within the medial thalami, inferior colliculi and periaqueductal grey matter. This distribution being indicative of WE.

Take-home message: WE is characterised by a depletion of thiamine reserves with malnutrition being the commonest predisposing factor. In this case we suspect he was initially poorly nourished and due to additional hyperthyroidism suffered a gross mismatch in demand and supply, consequently developing WE. Treatment with IV-thiamine has facilitated recovery to different degrees in the literature, ranging from slight improvement to full recovery. Hospital protocols often only recommend prophylactic IV-thiamine to those with a history of alcohol dependence. This case emphasises the need to consider prophylactic treatment in any patient presenting in states of high metabolic demand, especially those with hyperthyroidism.

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Acute Necrotising Sialometaplasia

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Introduction: Acute Necrotising Sialometaplasia (ANSM) is a benign, rare and self-limiting inflammatory condition of salivary gland tissue which classically presents as a unilateral necrotic ulcer on the hard palate. It is clinically and histologically, mimics malignancy which could potentially result in an incorrect diagnosis and unnecessary treatment. ANSM is self-limiting and usually heals spontaneously between 3-12 weeks without complication.

Case description: A 43-year-old Caucasian female was referred to the Oral and Maxillofacial Surgery department by her general practitioner following an eight-day history of a painful ulcer on the hard palate. Her medical history was unremarkable, and she was a non-smoker with a low alcohol consumption. On examination, there was a 1.0x1.5cm diameter ‘punched out’ ulcer on the left posterior hard palate which extended down to bone. An urgent incisional biopsy was undertaken which confirmed a diagnosis of ANSM and excluded dysplasia. The patient was reassured and subsequently discharged at an eight-week review following resolution of the lesion.

Results and conclusions: ANSM can present a diagnostic dilemma as it mimics malignancy both clinically and histologically. It is therefore vital that practitioners have an awareness of the condition and appreciate its benign and self-limiting nature to avoid unnecessary surgical intervention and patient distress. An urgent referral to a specialist in Oral and Maxillofacial Surgery or Oral Medicine is vital such that an incisional biopsy can be undertaken to confirm a diagnosis and exclude malignancy.

Take-home message: Clinicians should be aware of ANSM and understand the importance of an urgent referral to a specialist to exclude malignancy.

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Inferior vena caval aneurysm - an unusual cause of back pain in a young girl

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Introduction: Aneurysms are defined as an abnormal dilation of an artery, vein or cardiac chamber. Aneurysms affecting the inferior vena cava (IVC) are rare, with just over 50 cases in the published literature. They are associated with caval thrombosis. We will discuss the aetiology and management of such cases.

Case description: A 14-year-old girl presented to her local hospital complaining of a two week history of worsening back pain, swelling and discoloration of the legs, and reduced mobility. Imaging suggested a psoas abscess, and drainage was arranged at a regional paediatric centre. Upon review, repeat imaging was sought which indicated an IVC aneurysm rather than a psoas abscess. There was thrombosis within the dilatation extending to the femoral veins which accounted for her symptoms.

Results and conclusions: The patient was anticoagulated in the first instance. The duration of the symptoms meant it was too late for thrombolysis, and the occluded segment was considered too long for conventional venous stenting. She has been placed in compression hosing and referred to the national centre for ongoing management.

Take-home message: Unusual presentations are often caused by rare pathologies. In any patient presenting with bilateral swollen, purple legs; it is imperative to establish if there is any venous occlusion. This was also an important lesson in being wary of draining supposed psoas abscesses in young patients.

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New horizons in intraoperative diagnostics of cancer in image and spectroscopy guided pancreatic cancer surgery

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Objectives: Currently, the primary treatment for solid tumors is the surgical resection. In the surgery, the complete surgical resection of the cancer tissues is essential to the prognosis of cancer patients. However, even in US, 40% of the cancer patients have the local recurrence in 5 years from the initial surgery, due to the failure to detect all the cancer tissues intraoperatively since cancers are highly heterogeneous in surface morphology and anatomical structures. We designed a novel visible/near-infrared (VIS/NIR) quantitative imaging method to help surgeons improve pancreatic cancer resection by providing quantitative intraoperative cancer diagnosis.

Method: All the clinical studies were performed according to an approved protocol by the Emory Institutional Review Board (protocol #: IRB00053609). Before the surgery, the patient receives an intravenous injection of indocyanine green (ICG). After 3-8 hours, the tissues of interest, are inspected intraoperatively with our lab-developed VIS/NIR imaging system. The VIS/NIR imaging system consists of two parts: a) a portable VIS/NIR camera imaging system for quick detection of potential cancers; b) a hand-held spectroscopic device for quantitative tissue assessment. Two IEEE 1394 cameras were assembled into an optical tube platform (Thorlabs, USA) to record VIS and NIR signals simultaneously.

Results: We have conducted dozens of clinical trials on human pancreatic cancer in Emory University Hospital and Saint Joseph’s Hospital in Atlanta, GA, USA. Over two hundred sample tissues from various pancreatic cancer surgeries, including distal pancreatectomy, Whipple procedure, and total pancreatectomy, were inspected with our imaging system. Within 1 sec, our device can quantitatively differentiate cancerous tissues from non-cancerous tissues intraoperatively: primary tumor and positive margins showed more than 100% stronger ICG fluorescence than normal tissues and negative margins did. The overall diagnosis accuracy of pancreatic cancer by our system is 93.7%.

Conclusions: In summary, we developed a comprehensive imaging system to provide surgeons with instantaneous (< 1 sec) cancer identification intraoperatively, compared to the traditional lengthy histopathological consultation (20-30mins for intraoperative frozen section procedure with lower diagnosis accuracy, or hours-days for postoperative formalin fixed paraffin-embedded tissue preparation). Compared to the other reported imaging systems, our system has a unique advantage in providing quantitative NIR spectral analysis on the tissues of interest. This feature makes it possible to differentiate many tissues that current pre-vailing camera imaging systems cannot distinguish.

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Severe cognitive decline following chemotherapy of breast cancer

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Chemotherapy for different types of cancer is often life-saving. On the other hand, the spectrum of side effects may involve the central nervous system (CNS) and lead to severe emotional and cognitive disturbances, a syndrome often referred to as “The Chemo Brain”.

Here we report on a then 43-year-old female patient who first presented to our clinic in 2013 and in whom breast cancer of the right breast had been diagnosed four years earlier. At that time she became a patient of the Comprehensive Cancer Center of the University of Ulm (CCCU) and underwent breast-conserving therapy starting with systemic chemotherapy according to the rules of the GeparQuinto Study. This was followed by breast-conserving operation including axillary lymphopectomy. Histological examination of the excised material revealed an invasive ductal mammary carcinoma the exact staging of which will be reported in detail. Convalescence of the patient was protracted, and she continued complaining of difficulties to concentrate and to remember what she had been told or read shortly before. In addition, she complained of frequent mood swings. Therefore, she was referred to our department. Exploring her case history, we learned that she had worked as a manager of a car rental company which she had no longer been able to do after her cancer treatment because of her cognitive deficits. Besides clinical and psychiatric examination, our diagnostic procedures included electroencephalography (EEG), magnetic resonance tomography (MRT) of the brain using gadolinium enhancement, and extensive neuropsychological testing. In detail, components of the Wechsler Adult Intelligence Scale (WAIS), the Ray Auditory Verbal Learning Test (RAVLT), the Multiple Choice Vocabulary (“Mehrachwahl-Wortschatztest”), the “Regensburger Wortflüssigkeitstest” (Regensburg Word Fluency Test, RWT), and the “Testbatterie zur Aufmerksamkeitsprüfung” (Test Battery for the Assessment of Attention, TAP) were applied.

Whereas the EEG was unremarkable, the MRT performed in 2013 showed brain atrophy with frontotemporal accentuation. As an accessory finding, an arachnoid cyst was detected at the left temporal pole. No metastases were found. Interestingly, we had the opportunity to compare these findings with those of an earlier MRT performed in 2011. In the latter one, the arachnoid cyst was also visible, but there was no pronounced brain atrophy. These observations raise the question if progressive brain atrophy might be associated with the syndrome of "Chemo Brain". Neuropsychological examination revealed severe cognitive deficits in this patient – details of which will be reported – apparently due to the chemotherapy she had undergone. Possible mechanisms of action, treatment options, and ethical implications will be discussed.

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A rare presentation of Potassium iodate toxicity

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Keywords: Potassium iodide overdose; resistant hyperkalemia; rhabdomyolysis; Acute kidney disease; Methemoglobinemia; Aspiration pneumonia; Fluid overload secondary to Renal failure; Bilateral vitreous hemorrhage with posterior vitreous detachment

Introduction: Potassium iodate is a compound used for nutritional supplementation in table salt and administered to individuals exposed to radioactive iodine. Toxicity to Potassium iodate is not a common presentation to the emergency room. In this case report, we present a young man who was brought to the ED after deliberate oral ingestion of Potassium iodate, who then had a remarkable clinical course in the hospital.

Case description: A 26-year-old Sri Lankan male was referred to the Emergency department as a case of ST elevation MI from the primary health centre, where he had presented with diarrhoea. In the Emergency, he admitted to have consumed a “handful” of potassium iodate powder, 17 hours prior to presentation to ED, as an act of deliberate self-harm. He then had complaints of cramping abdominal pain, loose stools and vomiting. He was also complaining of visual disturbances, in the form of seeing everything with a greyish tinge.

On initial assessment of patient, he was talking, with a patent airway, no evidence of any respiratory distress and had stable haemodynamics and GCS of 14/15. Visual acuity was 6/6 but stated everything appears grey.

ECG showed ST elevation and tall T waves in chest leads, reciprocal changes of ST depression in III, aVF with prolonged PR and QRS interval. Echocardiogram was done which showed no regional wall motion abnormality. Labs showed high potassium (K-7.6meq/L). Other notable results were CPK of 3909U/L, myoglobin more than 5000ng/ml, high sensitive Troponin T - 220ng/ml, Troponin I - 1.8ng/L, Leukocytosis of 34500/uL and osmolar gap. Fibreoptic laryngoscopy looking for any features of corrosive damage to upper airway proved normal. Over few hours he developed methaemoglobinaemia.

Treatment was started for hyperkalemia but only had transient response to repeated medical management. Emergency hemodialysis was started to treat the hyperkalaemia. He was later admitted under the intensive care with input from renal team. He received hemodialysis for more than 3 weeks. He was also found to have only light perception in both eyes with bilateral vitreous hemorrhage and posterior vitreous detachment. Patient as of date has started to pass urine. He is off hemodialysis. He still has renal failure and is continuing treatment in the medical floor.

Conclusion: Though renal failure, hyperkalemia and retinopathy have been described in literature, the presentation and clinical course of this patient were unique in many ways including severe rhabdomyolysis leading to acute tubular necrosis and bilateral vitreous hemorrhage with posterior vitreous detachment.

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Unexpected in utero exposure to psychotropic medications

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Introduction: Pregnancies in the world each year involve women who have or who will develop psychiatric illness during the pregnancy. Psychotropics in gestation could produce adverse perinatal and postnatal outcomes, however counseling these women to discontinue medication presents new risks associated with untreated or inadequately treated mental illness, such as poor prenatal care, inadequate nutrition, and increased alcohol and tobacco use. The single administration at a higher dosage over multiple medications, active pharmaceutical compounds with fewer metabolites and higher protein binding are preferred. Nevertheless all psychotropic medications cross the placenta, are present in amniotic fluid, and can enter breast milk.

Case description: The FDA, the Australian Drug Evaluation Committee and Micromedex have categorized medications according to risk during pregnancy. Based on these classifications Benzodiazepines, have been demonstrated possibly teratogenic however they are still used for treating anxiety, panic, seizures and insomnia. International Pharmacopoeia reported an increased risk of intrauterine growth retardation, hypotonia, bradycardia, respiratory depression, low Apgar and preterm delivery for fetal plasma drug concentrations equivalent to the therapeutic range of maternal prescription. Very few data are published on sudden intrauterine death (SIUD) for intrauterine exposure to psychotropic medication. We describe a SIUD correlated with unexpected toxic plasmatic fetal concentration of Lorazepam.

Results and conclusions: The pregnant manifested anxiety, panic attack and deficiency of emotional transport for the fetus. She was treated with Lorazepam evening dose of 2mg from 24 to 40 gestational weeks, according to therapeutic range prescription, when suddenly and unexpectedly fetus died in utero just before the delivery. We evaluated the maternal and fetal pharmacological plasmatic concentration and observed a fetal plasmatic level of Lorazepam of 330mcg/l greater the toxic cutoff of 45mcg/l, suggested by Micromedex to cause “floppy infant” syndrome. By autopsic diagnosis we hypothesized neuropathological signs of sudden cardiac arrest in health fetus.

Take-home message: We propose that the monitoring of the maternal plasma levels of benzodiazepines during pregnancy and assessment of the concentration umbilical cord at birth, have to be correlated with the fetal vital signs. Nevertheless, it is difficult to define the metabolic fate of drugs in utero. Each of the major metabolic pathways can be promoted by placental and/or fetal enzymes and the metabolite concentration in the fetus does not ineludibly reflect the ability of the fetus to metabolize drugs. For this reason it has to be strictly evaluated the toxicological etiopathogenesis of some cases of SIUD and still birth.

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Marcus Gunn Syndrome and implications for Oral and Maxillofacial surgery (OMFS)

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Introduction: Marcus Gunn Syndrome, also known as Jaw Wink Syndrome or trigemino-ocular motor synkinesis, was first reported in 1883. It typically presents at birth with unilateral ptosis and eyelid elevation on jaw opening. Pathophysiology is explained by an oculofacial synkinesis. There is an aberrant connection of the oculomotor nerve and the mandibular branch of the trigeminal nerve resulting in eyelid elevation on mouth opening. The typically congenital syndrome is exceptionally rare. It is often diagnosed in infancy with complete ophthalmic examination and ptosis evaluation. This syndrome does not often require surgical intervention but it may still have an impact in clinical management.

Case description: A 32-year-old male presented in the OMFS outpatient clinic in Countess of Chester Hospital for extraction of his lower third molars. His past medical history included a known diagnosis of Marcus Gunn Syndrome but he was otherwise fit and well. He had resting ptosis of the left and elevation of the left eyelid on jaw protrusion.

Results and conclusions: Third molars were removed uneventfully under local anesthesia and no further treatment was required. Literature suggests that patients with Marcus Gunn Syndrome may have an atypical oculocardiac reflex during their surgical procedure and patients are at increased risk of malignant hypothermia. In this case, the procedure was performed under local anesthesia but this condition may impact on surgical planning if general anesthesia was to be considered.

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Rash or infection? An uncommon case of fever with skin lesions

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Introduction: Acute generalised exanthematous pustulosis (AGEP) is rare form of late hypersensitivity syndrome that can be sometimes mistaken as a skin infection. The differential diagnosis of infectious pustular lesion is large but it can also appear in the setting of a complete non-infectious state.

Case description: We present a 40-year-old woman from a French-Canadian background who developed pustular lesions all over her body in the setting of fever, weakness and headache. She was previously affected by an Henoch–Schönlein purpura and developed secondary chronic infectious leg skin lesions.

Result and conclusion: Two months before the apparition of the pustules, she was treated by many different antibiotics (cephalexin,
Although AGEP remains to be a rare disease, it has an excellent prognosis. A scrupulous medical history helps to identify potential causative drugs in most cases. Although AGEP remains to be a rare disease, it has an excellent prognosis if identified and treated correctly by removing the responsible molecule.

**Take-home message:** Late hypersensitivity reactions appear usually one to two weeks after the exposure to a new medication. A scrupulous medical history helps to identify potential causative drugs in most cases. Although AGEP remains to be a rare disease, it has an excellent prognosis if identified and treated correctly by removing the responsible molecule.

### Stevens Johnson syndrome during postoperative period. A case report

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**Introduction:** The Stevens Johnson syndrome is a rare and potentially fatal cutaneous reaction to medications or infections. The most common drugs linked to this syndrome are antibiotics (such as sulfonamides, cephalosporines and quinolones), anticonvulsivant drugs (carbamazepine, phenytoin) and nonsteroidal anti-inflammatory drugs (NSAIDs). It is characterized by extensive necrosis with detachment of the epidermis, and the mortality rate rises up to 30%. We present a case of Stevens Johnson syndrome associated with drugs administration during postoperative period.

**Case description:** A 73-year-old female reported to Department of Hepatic Surgery for a hepatectomy due to colorectal liver metastases. Her oncological history initiated 5 months ago with a colorectal obstructive tumor and liver metastases in both lobes. An emergency Hartmann procedure was performed following adjuvant chemotherapy, with good response. The surgical team decided to perform a two stage hepatectomy. The postoperative period was torpid and a reintervention for bowel obstruction was required, as well as two long stays in the Intensive Care Unit. A month after the first surgery, the patient presented with a reddish maculopapular lesion on the neck that rapidly extended to the back and forearms. An intra-oral erythema and conjunctival ulcerations were also noted. The diagnosis of syndrome was confirmed by the Department of Dermatology with a skin biopsy. Pharmacology and Allergy Departments completed the study and proposed that the syndrome was possibly due to peniciline and NSAIDs. Despite the efforts of the multidisciplinary team, the supportive care, and the early retreat of the possible causing drugs and ciclosporin plus corticosteroids treatment, the patient presented with severe liver failure and finally died after 2 months of hospitalization.

**Conclusions:** Cutaneous reactions are a very common condition during the postoperative period, most of them are related to habitual drugs regimens. Considering this, it is of paramount importance to keep in mind that the Stevens Johnson syndrome is a rare but severe dermatological pathology in which early diagnosis and treatment is vital.

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### Advanced concepts for medical robotic systems

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With the first recorded medical application of a robot – a CT-based orientation of a needle guide for biopsy of the brain – occurring in 1985, a number of research groups in Asia, Europe, and the USA began investigating other medical applications of robotics. Beside of a big number of research prototypes and scientific outcome, a relatively small number of commercial ventures were resulting from these efforts.

Now, after more than 30 years of activities and compared to many other fields of medical technology, medical robotics still can be considered as of being in its infant state. The number of commercially available setups actually could be increased, but only few of them really have created significant impact. Many research questions have been addressed in order to improve the technology, but the gap between research in laboratories and real use in surgical routine seems to get even bigger. If one looks to the main reasons for this slow adoption of new technology, it turns out to mostly not being related to technical functioning, but to other factors such as:

- cumbersome use of robots (complexity, size, missing integration into clinical workflow) which hinders application in clinical routine,
- high cost for robot system and operational cost (i.e. cost/benefit ratio is not satisfactory in most cases),
- high setup time and effort (e.g. additional person for operating robot system),
- limitation in portability and/or mobility,
- unsolved safety issues.

The presentation will include a short introduction into medical robot systems for surgical applications. Topics include issues such as kinematic configurations, interfaces to existing surgical equipment, but also matters related to standards and regulations. One key aspect for (future) medical robots is related to its main operation principle. Current commercial robot systems are either directly controlled by a human operator or strictly follow a pre-defined path. Automated systems are limited to setups where no direct contact between robot and/or the guided tool takes place, e.g. to compensate (to a certain degree) breathing motion in external radiotherapy or for imaging purposes. On the cognitive side, a long thought-after feature is to estimate what the surgeon would like to do next. This could be taken into account when planning and executing the next movement of the robotized tool or camera. Addition of cognitive capabilities to the robot also has the potential to take a further step toward surgical automation, e.g. for the awareness of the current medical situation and the ability to react in a suitable way. Concrete robot applications - such as for percutaneous placement of needles for tumor ablation, neuro-surgical applications, or vitreo-retinal surgery - will further help to illustrate the possibilities but also the limitations of current medical robotics technology.

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A rare cause of bilateral sudden deafness

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Introduction: Diagnostic delay in relapsing polychondritis (RP) is in part explained by the fact that, by definition, the disease has to relapse before the diagnosis can be made, but also by its pluriform clinical presentation: auricular chondritis, arthritis and respiratory tract involvement are the most common signs in RP. Sensorineural hearing loss and vestibular dysfunction, as observed in the case we will describe, are less common, and facial nerve involvement is rare. Furthermore, this case is one of very few in which a cochlear implant was indicated after sudden deafness caused by RP.

Case description: In this case, we describe a 62-year-old female with recurring episodes of sudden deafness, vertigo and facial paresis. Within a month's time, this resulted in bilateral deafness and vestibular areflexia. Erroneously, the patient was diagnosed and treated as having sudden deafness of unknown origin and subsequently neuroborreliosis (Lyme disease). The true diagnosis of RP was revealed 9 months after initial presentation after the patient was referred to our department for cochlear implantation. At this time, an episode of a red and swollen ear occurred, which prompted further examination and subsequent diagnosis. During cochlear implantation, the base of the cochlea was found to be partially calcified. Insertion and hearing rehabilitation were however successful.

Results and conclusions: Timely identification of RP as the cause of this profound sensorineural hearing loss proved to be important. Not only in order to provide suitable follow-up, but because of the risk of cochlear obliteration, which had already begun in our patient and might have hampered optimal hearing rehabilitation. Our recommendation is to urgently refer any patient with bilateral sudden deafness to a cochlear implant center, especially when signs of postinflammatory calcification of the cochlea are identified, like it was in this case of RP.

Take-home message: Due to the pluriform presentation and relapsing nature of RP, patients almost never present with the 'full clinical picture' of RP. Because of this, different doctors of different disciplines (mostly general practitioners, otolaryngologists, ophthalmologists and rheumatologists) see different symptoms at different moments in time. Frequently, symptoms have initially been attributed to other forms of disease, and only careful history taking with attention to symptoms beyond the scope of one's own specialty, will reveal the diagnosis.

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An incidental finding of a paratesticular leiomyoma on varicocele repair

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Introduction: The paratesticular region is composed of spermatogenic cord, epididymis, vestigial remnants, and tunica vaginalis. Although paratesticular neoplasms are rare, they are clinically significant lesions that affect patients of all ages. Epididymal tumours, both primary and secondary, whether benign or malignant are extremely rare and the incidence is at most 0.03% of all male cancers. Benign tumours accounts for 75% of epididymal tumours cases. The most common benign epididymal tumour are adenomatoid tumors, followed by leiomyoma and papillary cystadenoma. Thus, we report a case of leiomyoma in a 51-year-old male who presented with a long standing history of gradual growing scrotal swelling.

Case description: A 51-year-old gentleman referred to the outpatient clinic with left scrotal pain and gradual swelling for more than 7 years. There were no associated obstructive lower urinary tract symptoms, trauma, fever or constitutional symptoms. The patient had a background surgical history of left varicocele repair 7 years ago. He has an unremarkable past medical history. On examination, no masses were felt in the abdomen. There was an old scar at the left groin from the previous surgery and a hard non tender swelling was felt in the left scrotal sac inseparable from the left testes and epididymis, which was irreducible and not transluminal. Dilated and tortuous veins above the testicle (‘bag of

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Atypical coexistence of genitourinary tuberculosis, metastatic prostate cancer and non-muscle invasive bladder cancer: A case report

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Introduction: Prostate cancer is the second most common cancer in men and the fifth most common cancer worldwide. Screening is based on Prostate Specific Antigen (PSA) blood test and digital rectal examination. The actual diagnosis of prostate cancer can only be made with a prostate biopsy. According to WHO reports, about 30% of the world’s population has latent tuberculosis. Genitourinary tuberculosis is responsible for one third of extrapulmonary cases. Bladder cancer is highly aggressive malignancy that causes significant morbidity and mortality. It is the most common malignancy of the urinary tract. Globally it is the 9th most common cancer diagnosed worldwide.

Case description: A 70-year-old male was admitted to undergo fourth in his life transrectal prostate biopsy. He had a Prostate Specific Antigen level of over 1000ng/mL. He was referred to our department for transrectal ultrasound-guided biopsy. Biopsy revealed asymmetric enlargement of the prostate, with palpable nodules. Histopathology revealed genitourinary tuberculosis and prostate cancer. Nevertheless patient received hormonal treatment. Five months after last biopsy, a 66-year-old man, presenting with a long standing history of gradual growing scrotal swelling, was referred to our department for gonoscopy. On examination, no masses were felt in the abdomen. There was an old scar at the left groin from the previous surgery, and a hard non tender swelling was felt in the left scrotal sac inseparable from the left testes and epididymis. The patient had a background surgical history of left varicocele repair 7 years ago. He has an unremarkable past medical history. On examination, no masses were felt in the abdomen. There was an old scar at the left groin from the previous surgery and a hard non tender swelling was felt in the left scrotal sac inseparable from the left testes and epididymis, which was irreducible and not transluminal. Dilated and tortuous veins above the testicle (‘bag of

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Translational strategy in NASH diversity: learning from mouse models

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Objectives: Nonalcoholic steatohepatitis (NASH) is a histological definition that groups together defects in diverse biochemical processes causing hepatic fat accumulation, inflammation, necrosis and fibrosis. Increasing evidence points to different subtypes of nonalcoholic fatty liver disease (NAFLD) which progress to NASH and fibrosis at different rates and may respond differently to treatment. The identification of the types of mechanisms leading to NASH and the discovery of non-invasive biomarkers of NASH subtypes are central for the development of effective treatments and precise diagnosis. This study aims to capture the metabolic signature of different NASH subtypes through a translational research.

Method: We undertook metabolomic serum analysis in a mouse model of NASH diversity. We used a mouse model that spontaneously develops NASH, methionine adenosine infusion (Mat/a-KO), and compared with WT mice. Top fifty metabolites that more significantly differentiated between genotypes were selected and translated to a human cohort: 535 biopsied patients (353 steatosis, 182 NASH). For that, we performed a Silhouette cluster analysis and validate the process in 1000-fold repetition of a random partition (50/50) of samples into two cohorts with equal proportional representation of steatosis/NASH. The frequency distribution of NAFLD patients into subtypes and of metabolites that significantly differentiated between NASH and steatosis per subtype was calculated.

Results: Silhouette cluster analysis revealed that Mat/a-KO signature sub-classified the patients into two clusters, one showing a serum metabolic profile similar to that observed in Mat/a-KO mice (M-subtype) and other showing a different profile (non-M-subtype). Following the criteria based on 2:70% reproducibility of the frequency distribution, 262 patients were classified as M-subtype and 171 as non-M-subtype. The remaining 102 patients showed a reproducibility of less than 70%. A NASH biomarkers list per subtype was generated based on the frequency distribution (2:70% reproducibility) of the metabolites that significantly differentiated between NASH and steatosis: 54 and 6 metabolites for M- and non-M-subtypes, respectively.

Conclusions: We identified a serum specific metabolic signature characteristic of Mat1a-KO mice and found that about half of NAFLD patients share it, suggesting that in these patients SAMe synthesis may be impaired. Interestingly, this phenotype was observed in patients with steatosis and NASH, which suggests that impaired SAMe synthesis may occur early in the development of NAFLD in a subgroup of patients. This translational strategy can be applied to different mouse models with diverse mechanisms leading to NASH. These results also indicate that the traditional, mainly pathology-driven classification of NAFLD/NASH, can be refined and perhaps represented by metabolomics classification.

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Utilization of antihypertensive drugs in obesity-related hypertension: A retrospective observational study in a cohort of patients from Southern Italy

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Although the pathophysiological mechanisms of arterial hypertension are different in obese and lean patients, hypertension guidelines do not include specific recommendations for obesity-related hypertension and, therefore, there is a considerable uncertainty on which antihypertensive drugs should be used in this condition. Moreover, studies performed in general population suggested that some antihypertensive drugs may increase body weight, glycemia and LDL-cholesterol but it is unclear how this impact on drug choice in clinical practice in the treatment of obese hypertensive patients. Therefore, in order to identify current preferences of practitioners for obesity-related hypertension, in the present work we evaluated antihypertensive drug therapy in a cohort of 129 pharmacologically treated obese hypertensive patients (46 males and 83 females, aged 51.95 ± 10.1 years) that came to our observation for a nutritional consultation. Study design was retrospective observational. Differences in the prevalence of use of the different antihypertensive drug classes among groups were evaluated with χ²square analysis. Threshold for statistical significance was set at p < 0.05. 41.1 % of the study sample was treated with one, 36.4 % with two and the remaining 22.5 % with three or more antihypertensive drugs. In patients under single drug therapy, β-blockers, ACEIs and ARBs accounted each for about 25% of prescriptions. The prevalence of use of β-blockers was about sixfold higher in females than males. Diuretics were virtually never used in monotherapy regimens but were used in more than 60% of patients on dual antihypertensive therapy and in all patients assuming three or more drugs. There was no significant difference in the prevalence of use of any of the aforementioned drugs among patients with obesity of type I, II and III or between patients with or without metabolic syndrome. In conclusion, our data show that no first
Skenes gland cyst causing urinary retention

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Introduction: Skene’s gland also known as paraurethral glands are bilateral prostatic homologues glands. It was first discovered and described by Alexander Johnston Chalmers Skene in 1880. Paraurethral glands are located posterolaterally to the urethra. Embryologically derived from the urogenital sinus. Skene’s gland secretes a small amount of mucoid material which has a role in sexual stimulation and lubrication. The etiology of paraurethral cysts remains unknown. The obstruction of Skene’s ducts as a result of infection or in cystic degeneration of embryonic remnants of the paraurethral glands, have been assumed to be possible causes of paraurethral cysts. The distinguishing features of paraurethral cysts are the displacement of urethral meatus by the mass and a cyst containing milky fluid. Thus, we report a case of Skene’s duct cyst in a female which presented with acute urinary retention secondary to the lateral displacement of meatus.

Case description: A previously healthy female presented to casualty with gradual onset of suprapubic pain, associated with a sudden onset of the inability to void for 6 hours. The patient was complaining of obstructive lower urinary tract symptoms for 2 weeks. She had 3 uncomplicated normal full term vaginal deliveries with an unremarkable past medical or surgical history. Examination of the external genitalia revealed an ovoid, fluctuant, tender swelling located just inferior to pubic symphysis and completely displacing and stretching the external urethral meatus to the opposite side. Compression of the swelling did not result in fluid extravasation through the urethra. Vaginal patency was also verified. Insertion of 14 Fr Foley’s catheter was managed with difficulty and drained 600cc clear urine. MRI showed normal kidneys, ureters and urinary bladder with a simple 2.1x2.7x3.3cm lower vaginal cyst with high protein/hemorrhagic content mostly a paraurethral gland duct cyst. Patient underwent examination under anesthesia, cysto-urethroscopy and skene’s duct cyst excision was done. Histopathology examination displayed the presence of benign cystic lesion lined by transitional and squamous epithelium with focal surface ulceration; thereby confirming the diagnosis of paraurethral cyst. Foley’s catheter was removed after 5 days and she voided freely.

Results and conclusions: Skene’s gland cyst should be listed in the differential diagnosis of a female patient who comes with an acute urinary retention.

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Tracheoesophageal fistula in siblings - A rare occurrence

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Introduction: Esophageal atresia is one of the most common congenital malformations occurring in 1 in every 2000-4000 live births. Previously considered to be a fatal condition, it has now become an eminently treatable condition with survival limited only by the presence or absence of major cardiac malformations. For the majority of families, the condition is unique to one child which in itself is challenging. It is extremely rare to affect more than one sibling in any family. The risk of recurrence is 0.5-2% and rises to 20% if another sibling is affected.

Case description: We report on two siblings, born two years apart with Type C TOF who were treated at King Hamad University Hospital, Bahrain. The first sibling was born with a short gap esophageal atresia with a distal fistula and repaired shortly after birth in another institution. The second sibling was born with a more challenging long gap esophageal atresia also with a distal fistula. The fistula was ligated on the second day of life and a gastrostomy tube put in place for feeding; repair of the atresia took place 2 months later. Both patients underwent serial dilations to overcome strictures but are both tolerating oral diets. The third sibling in the family was unaffected with TOF or any VACTREL association.

Conclusion: The etiology of TOF is multifactorial with genetic, environmental and unknown components. There were no known environmental factors which could have contributed to this rare occurrence, but the only factor of significance is consanguinity of the parents who are first cousins. On the other hand, genetic factors are responsible for 12% of cases, these are classified as Chromosomal mutations, Syndromic or Isolated. These siblings do not fall into any of the mentioned categories and it is therefore speculated that this occurrence is due to a sporadic mutation.

Take-home message: Esophageal atresia with or without fistula is a fairly common condition encountered by paediatric surgeons on a daily basis. Despite increased experience and advancements in management of complex cases, the etiology remains a mystery. Future research should focus on more in-depth genetic studies on the impact of co-sangunivity on sibling TOFs.

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GERD: A debated background of achalasia

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Achalasia is a primary esophageal motility disorder of unknown etiology, characterized by aperistalsis of the esophageal body and impaired lower esophageal sphincter (LES) relaxation. However achalasia is the best characterized esophageal motility disorder, its pathogenesis is still not entirely clarified. Available data suggest that the disease is multifactorial, involving hereditary, autoimmune and environmental factors, such as viral infections, but the exact initiating factors that may play a role in the development of the disease remain unclear. Our hypothesis is that one possible initial insult that leads to the development of achalasia can be the gastroesophageal reflux disease. This theory was first proposed by

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Smart et al. in 1986. In our case study we report the case of a 65-year-old woman who had typical reflux symptoms with heartburn and regurgitation for about seven years. During the year before her admission to our clinic her reflux symptoms resolved and dysphagia developed. Endoscopy revealed esophageal dilatation with erosive esophagitis, narrowed cardia and hiatal hernia. Biopsies from the distal esophagus showed chronic esophagitis and Barrett's metaplasia. Barium swallow showed dilated esophageal body with decreased peristalsis, nonrelaxing sphincter and retention of barium. Manometry and 24-hour pH monitoring was performed. The LES pressure was 34.5 mmHg with 11.9% relaxation. 24-hour pH-metry showed acid reflux, with multiple sharp dips characteristic of typical gastroesophageal reflux, with total DeMeester score of 94.6. Using pH 3 as a discriminatory threshold for GERD the reflux score was 64.2. Achalasia and concomitant GERD was diagnosed and the patient underwent laparoscopic surgery. The hiatal hernia was reconstructed and a Heller's myotomy with a 360 degree Nissen fundoplication was performed. At the 3-year follow-up the patient was symptom free. In summary, based on our experience and the review of the literature we believe that there is a cause-and-effect relationship between gastroesophageal reflux and the development of achalasia. We believe that the development of achalasia in patients with GERD can be a protective reaction of the esophagus against reflux. In these cases the treatment of choice should be different from that of pure achalasia patients: a laparoscopic Heller's myotomy completed with a 360 degree Nissen fundoplication should be the recommended surgical treatment to minimize the possibility of postoperative reflux disease.

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Reduced GO/NOGO ACC-sensitive activity in a case of Parkinson's disease with impulse control disorders

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Introduction: The incidence of impulse control disorders (ICDs) in Parkinson’s disease is as high as 20%. Dopamine agonists can induce alterations in those frontal-striatal networks that manage reward and mediate impulse monitoring and control. Indeed, tonic stimulation of dopamine receptors may damage inhibitory control mechanisms and reward processing, while promoting compulsive repetition of behavior. The neurocognitive approach considers two measurable executive functions from which ICDs can be detected: 1) response-inhibition, which neural substrate is located in the inferior portion of the prefrontal cortex; 2) integration of reward/punishment contingencies in individual choices, which neural substrate is located in the orbitofrontal cortex.

Case description: A 51-year-old man with a 12-year story of Parkinson’s disease, presenting motor fluctuations, and stable on 375 mg/day of levodopa was admitted to the hospital for the ascertainment of requirements for DBS surgery (MDS-UPDRS-III OFF = 56; Hoehn-Yahr = 2). In 2014, the patient developed an impulse-control disorder, including compulsive intake of sugary and high-fat food, and video-games dependence. Grazing behavior and hyper-focus on in-game achievements interfered with the patient’s everyday life. During neuroimaging data acquisition, the subject was asked to perform a response-inhibition ACC-sensitive task in which the subject had to respond to GO stimuli inhibiting the response to infrequent NOGO stimuli.

Results and conclusions: Examination findings included the following: bilateral bradykinesia and tremor of the upper limbs. The remaining neurological examination was negative. The neuropsychiatric assessment revealed significant levels of anxiety. Although the patient exhibited a normal global cognitive profile, reaching normative scores on the screening tests, abnormalities were detected for the performance on conceptualizing and response-inhibition tasks. The MRI showed no alterations in the brain parenchyma signal. The patient showed no response-inhibition abilities as measured by the GO/NOGO task and action-monitoring deficits (error awareness). Moreover, fMRI acquisition revealed absent task-sensitive recruitment of cingulo-frontal regions for the contrast NOGO vs GO.

Take-home message: In our experience, fMRI response-inhibition task may be useful in PD for better characterizing the clinical profile evaluating treatment options. A frontostriatal – cingulo-frontal dysfunction may reflect impairment in metacognitive-executive abilities (such as response-inhibition, action monitoring and error awareness). Interestingly, impaired response-inhibition is an example of the motor/behavioral aspect of impulse control. Its assessment is supposed to be particularly useful in the PD post-diagnostic phase, to better identify individuals at risk of developing ICDs with dopaminergic medication. Theoretical models will be more effective if they integrate fMRI and neuropsychological data according to a neurocognitive approach to Parkinson’s disease and ICDs.

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Partial Priapism: A rare presentation of sickle cell anemia

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Introduction: Partial segmental thrombosis of the corpus cavernosum (PSTCC); known as partial priapism; is an uncommon urological condition which predominantly affects young men in which the proximal part of one corpus cavernosum is thrombosed. Many risk factors are described in the literature, the exact etiology of penile thrombosis and its pathogenesis remains unclear. Several treatment options are available ranging from conservative medical treatment with NSAIDs, antibiotics, analgesics, low molecular weight heparin, acetylsalicylic acid and antibiotics, surgical or to a follow-up observation without treatment. In this study we presented a sickle cell patient who presented with pain and perineal swelling and diagnosed with PSTCC using MRI and was treated conservatively.

Case description: A 23-year-old male, known case of sickle cell anemia, presented to casualty with a 1-day history of perineal pain of a sudden onset, increasing in severity, no aggravating or relieving factors. It was associated with perineal swelling, decrease in urine output and vomiting, not associated with urethral discharge, erectile dysfunction, trauma, sexual contact, fever, abdominal pain, lower urinary tract symptoms, change in bowel habits, or bleeding per rectum. He had a past history of left pyeloplasty in childhood. He was a smoker, non-alcohol consumer with a family history of liver malignancy. Examination revealed a stable vitals, abdomen was soft and non-tender, genitourinary exam findings confirmed the absence of priapism. There was a normal circumcised penis, normal bilateral testis and epididymis, separated perineal mass slightly hard in consistency, fixed and tender at the proximal part of the penis. Digital rectal examination was unremarkable. The complete blood count showed mild leukocytosis, electrolytes, coagulation profile, urine analysis and urine culture were unremarkable. MRI perineal and penis showed the right intratunical corpus cavernosum with altered...
signal intensity involving the root, proximal and mid third sparing the distal third of corpus cavernosum, maximum width of 26mm (predominantly hypointense with a few areas of hypersignal intensity). Visualized Buck's fascia and tunica albuginea were intact. Features mostly suggestive of right corpus cavernosum hematoma. Conservative treatment was initiated with 6 hourly IV paracetamol and the response was observed with gradually disappearing pain, reduction in swelling size and leukocytic count. On follow up patient was pain free, reduction in swelling size with a recovery of painless erection. A follow up ultrasound of the scrotum and a hematologist referral were arranged. 

Results and conclusions: PSTCC is not an urological crisis and has an excellent prognosis. Conservative treatment appears to be a reliable therapeutic option. Surgery is reserved for patients in whom conservative management fails.

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Spontaneous regression of a mandibular arteriovenous malformation in a 9-year-old boy: Case report with twelve month follow up

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Introduction: Arteriovenous malformations (AVMs) of the jaws are considered as an unusual disease. Depending on the blood flow, size, and affected site of the AVMs, they may lead to life-threatening complications with significant morbidity. Mandibular AVMs may produce a wide variety of clinical signs and symptoms, which can lead clinicians to misdiagnosis and potential hemorrhages during inadvertent dental extractions in nearby areas of undiagnosed lesions. Although the spontaneous regression of an AVM had already been recognized in other human organs, the complete disappearance of a mandibular AVM is still considered a rare phenomenon. We aimed to report a clinical case of a spontaneously regressing mandibular AVM.

Case description: Nine-year-old boy was referred for Oral Medicine Clinic (Ororoentro/Piracicaba Dental School - University of Campinas, Brazil) for the evaluation of a “mandibular lesion”, with an hemorrhagic event history after the inadvertent extraction of a deciduous molar (tooth number 75) associated with the lesion. Intraoral examination revealed an exophytic component with erythematous lesion in the left alveolar ridge, bleeding to light touch, flaccid, pulsatile, with absence of symptoms, and presented mobility grade II in tooth number 36. Both, intraosseous and gingival involvement were observed. Panoramic radiograph showed diffuse bone thinning in the left mandibular body involving tooth 36. Tomographic exam showed the presence of hypodense lesion in the left mandibular body of considerable dimensions. Considering the clinical characteristics, we formulated the diagnostic hypothesis of AVM. An arteriography without any embolization procedure was performed and confirmed the AVM diagnosis. A spontaneous regression of the AVM clinically and on imaging tests was observed after the arteriography. Twelve month follow up keeps the complete spontaneous regression of the intraoral exophytic component, complete clinical remission of the lesion and number 36 mobility grade I.

Results and conclusions: Although, oral AVM is a rare event, it may mimic benign inflammatory processes and reactive lesions. Thus, dental extractions associated with atypical lesions should be avoided until a vascular component is ruled out. Spontaneous regression of an AVM is an extremely rare event, not yet described in a mandibular lesion. In conclusion, we speculate that this rare case of a spontaneous regression of AVM could be due to the hemodynamic changes in the circulation and pressure of the lesion induced by the arteriographic exam.

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A true silent compartment syndrome in a competent sensate patient: Case report

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Keywords: Compartment syndrome; Silent; Open tibial shaft fracture; Pain

A 21-year-old competent sensate man developed a compartment syndrome without significant pain after intramedullary nailing of an open short oblique fracture of the distal tibial shaft (AO 42-A2). A dropping foot and reduced sensation in the first web space was noticed 5 days after the operation. Until then, the patient was comfortable with Paracetamol and Novaminsulfon, but the compartment pressure measurement of the anterior compartment revealed a pressure of 80mmHg. At emergency fasciotomy of all four compartments of the lower leg, the muscles of the anterior compartment were dusky, sparsely bleeding and not contracting on stimulation. After 3 weeks of regular debridement of grey muscle parts and continuous vacuum pressure dressing the tibialis anterior muscle was still necrotic and the extensor digitorum and hallucis longus muscle partially necrotic. The patient underwent complete myectomy of the tibialis anterior muscle and the distal parts of the extensor digitorum and extensor hallucis muscles. The compartment was covered with a functional gracilis free flap and a thiersch graft from the anterolateral thigh. The development of pain, that is not controllable with analgetics and out of proportion to the injury sustained is said to be the first and most reliable symptom for the increase of compartment pressure. Our patient never reported pain of an intensity of more than 2/10 on routine pain scale monitoring. In the literature we found little cases of competent sensate adult patients. We think it is important to know, that the absence of significant pain does not exclude a compartment syndrome. We want to increase the sensitivity for a high index of suspicion after suitable trauma and motivate to measure compartment pressure even in patients with no significant pain.

Background: A 21-year-old competent sensate man developed a compartment syndrome without significant pain after intramedullary nailing of an open tibial shaft fracture. Because of complete paresis of the nervus peroneus profundus 5 days postoperatively he underwent myectomy of the anterior compartment covered with a functional gracilis free flap. The development of pain out of proportion to the injury sustained is said to be the first and most reliable symptom for the increase of compartment pressure. This was not the case in our patient. We think it is important to know that the absence of significant pain does not exclude a compartment syndrome. We want to increase the sensitivity for a high index of suspicion after suitable trauma and motivate to measure compartment pressure even in patients with no significant pain.

Case presentation: A 21-year-old man sustained an open isolated short oblique fracture of the distal tibial shaft (AO 42-A2) when he was caught by a slow driving car on a parking lot. The lower leg compartments were soft at initial assessment, there was no neurovascular deficit and the patient was otherwise healthy. Uneventful intramedullary nailing was performed. Postoperatively, the patient was comfortable with Paracetamol and Novaminsulfon and never reported of pain of an intensity of more than 2/10 on routine pain scale monitoring. The compartments of the lower leg were palpated daily by the surgeon. On the 5th postoperative day a dropping foot was noticed. Clinical examination revealed a complete paresis of the foot elevator, reduced sensation in the first web
Near-fatal arterial air-embolism and pulmonary artery bleeding after repetitive radiofrequency ablation (RFA) and surgery for multiple pulmonary metastases

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Introduction: A 49-year-old man, former top-athlete had "whoops" with residual tumour and re-resection of a pleomorphic rhabdomyosarcoma at the left thigh in 2008 followed by adjuvant radiotherapy. Since 2011 he developed a total of 24 lung metastases. He underwent resection via three right- and two left-sided thoracotomies, one RFA on the right and 8 RFA on the left side, as well as one left-sided stereotactic radiation. Additionally, a single hepatic metastasis was treated by RFA. Palliative chemotherapy (Myocet, Yondelis, Ixoten) proved futile. In spite of increasing technical challenge, another RFA of lung metastasis was scheduled.

Case description: For recurrent metastatic disease to the right lung RFA was applied, treating one central lesion and a second subpleural one, both in the upper lobe. The intervention was done in prone position under anaesthesia/intubation. Immediately after turning the patient to supine position he developed tachycardia followed by bradycardia and cardiac arrest. CPR was successful, but dramatic inflow-occlusion was evident. Immediate CT-control showed large amounts of air in the left heart, in the aorta, the coronary arteries and in the subarachnoidal vessels. While applying external pressure to both carotid arteries cardiac massage was continued in Trendelenburg’s position, whereupon the inflow-occlusion lessened.

Results and conclusions: The patient was transferred to the hyperbaric chamber and had re-compression according to Navy 6 protocol starting one hour after the incident. After hyperbaric oxygen therapy (HBO) he opened his eyes and was able to move both legs. On the next day acute, severe hemorrhage from the endotracheal tube developed. CT-Angiography showed a 2cm bleeding pseudoaneurysm of a subsegmental artery at the site of the central RFA. Coil-embolization stopped the bleeding. Weaning problems necessitated tracheotomy. After further 9 HBO treatments neurology was almost normal. Following uneventful removal of the tracheal cannula the patient was discharged two weeks after RFA.

Take-home message: In the palliative setting local treatment of lung metastases can prolong life considerably. Yet multiple interventions may be a risk factor for adverse events. In highly compliant palliative patients with a good performance status severe complications of such measures can be handled.

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Left atrial thrombus in a young patient with stroke

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Introduction: Thrombi of the left atrium are common sources of stroke, and since left atrium and LAA thrombi are treatable causes of embolism, the detection of thrombi may affect patient treatment and outcome substantially. Bedside ultrasound in emergency department is a standard of care and can diagnosed intracardiac thrombus and lead to potentially lifesaving treatment.

Case description: Here we are going to report a case of a patient who is 35-year-old Nepalese male with no known past medical history. He presented with right sided weakness and numbness for one day associated with minimal shortness of breath, palpitations and chest pain associated with visual disturbance in the right eye. On examination in the ED his GCS 15/15 with right sided weakness both upper and lower limb power 4/5 with sensory impairment. His chest was clear and heart sounds were irregular with loud S1. Rest of exam was unremarkable.

Results and conclusions: An ECG showed atrial fibrillation with fast ventricular response. Bedside transthoracic echo done in ED showed evidence of mitral stenosis with left atrial enlargement and left atrial thrombus. CT head showed large subacute left occipital infarction extending to left thalamus patient was evaluated by both neurologist and cardiologist and started on IV heparin followed by warfarin to keep INR 2-3. Official echo showed rheumatic appearing mitral valve with moderate to severe mitral stenosis and left atrial fresh thrombus occupying roof and lateral wall of left atrium.

Take-home message: This case demonstrates the utility of ED physician performing echocardiography to diagnose a dilated left atrium with a thrombus as the source of emboli in a young patient with stroke. Bedside echocardiography expedited the diagnosis, patient care, and treatment.

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Right sided reconstruction of the heart for invasive angiosarcoma of the right atrium

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Introduction: Primary cardiac tumors are a rare entity (0.0017 to 0.033%, based on autopies). Most cardiac tumors are metastastic locations of other primary tumors. About 75% of the primary cardiac tumors are benign, and 75% of these benign tumors are myxomas. The remaining 25% of the primary tumors of the heart are malignant, with a majority of sarcomas (75%). Median survival for cardiac sarcomas is only six months. A 35-year-old male presented with new diagnosis of cardiac angiosarcoma. We describe the case, diagnosis, treatment modalities and first observations concerning survival.

Case description: A 35-year-old male presented with palpitations and progressive dyspnea since five weeks. ECG showed atrial fibrillation and transthoracic echocardiography (TTE) demonstrated a large right intra-atrial mass (7.8x5.2cm), infiltrating the interatrial septum and the tricuspid valve. There were no signs of right ventricular inflow obstruction. TEE and cardiac MRI confirmed a large intra-atrial mass (59x49x68 mm) and because of the density, the irregular shape and the localization, an angiosarcoma was suspected (Figure 1). In addition infiltration of the pericardium and pericardial effusion were found. A FDG-PET/CT scan did not show signs of metastatic disease. Coronary angiography showed normal coronary arteries.

Results and conclusion: After fourteen days, a resection was performed under general anesthesia and full extracorporeal circulation (Figure 2). A reconstruction of the fibrous part of the septum and tricuspid annulus allowed implantation of a tricuspid bioprosthesis (Mosaic 33). Right and left atrium and the basal part of the right ventricle were reconstructed using pericardial patches. The vena cava superior was reconstructed using a PTFE graft. CABG was performed on branches of the right coronary artery using a saphenous vein graft. A permanent pacemaker was implanted after ten days because of persistent total AV-block. Patient recovered uneventfully of the intervention.

Take-home message: Pathologic examination showed a classic angiosarcoma, with resection margins free of tumor. CD31 and CD34 immunohistochemical staining was positive, confirming vascular differentiation and the diagnosis of an angiosarcoma (Figure 3). After multidisciplinary consultation between oncologists, pathologists, radiologists and cardiac surgeons an intensive adjuvant chemotherapy treatment was initiated. Up until the moment of evaluation there is a survival of six months, with a NYHA classification I and with no arguments for metastatic liver disease on PET-CT. We therefore believe that a radical and aggressive resection combined with optimal medical treatment can improve survival in this devastating disease.

Figure 1: pre- and postoperative imaging

1 + 2. pre-operative echocardiography (TEE): large right atrium mass
3. pre-operative MRI: large right atrium mass
4. post-operative echocardiography (TEE)
Clippers syndrome in a young patient with ataxia and dizziness

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Introduction: Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids: A rare central nervous system inflammatory disorder involving predominantly the pons as a distinct form of brainstem encephalitis centered on the pons, and/or the spinal cord. Usually presented with symptoms/signs referable to brainstem, cranial nerve-and/or cerebellar dysfunction. Symptoms related to long tract affections and/or spinal cord syndrome. Paresis, spasticity, plantar response, hyperreflexia, altered sensation of the extremities, decrease vibration sense, neurogenic bladder and cognitive deficits. Responsive to steroids and long term immunosuppression. MRI with contrast is a useful tool to help for early diagnosis of such cases.

Case description: Here we are going to report a case of a 28-year-old, previously healthy female presented to the ED with a history of blurring of vision, dizziness, headache, and paraesthesia of lower limbs, not alcoholic or smoker, no H/O drug intake. No family history of chronic disease. On examination the patient had normal vital signs (Temp. 37.2, RR 18 and SpO2 100%) her ENT examination is unremarkable. Her neck movements are unrestricted. Cardiovascular, respiratory and abdominal examinations are unremarkable. Her pupils are equal and reactive; fundoscopy is normal. She is orientated and follows commands, horizontal Nystagmus, DTRS exaggerated symmetrically, planter reflex down going on the left equivocal on the right, positive Romberg sign to the left and dysdiadochokinesia.

Results and conclusions: Non contrast CT head showed left periventricular parenchyma calcification suspicious of hemorrhagic spots. MRI brain showed multiple punctuate and curvilinear enhancing foci, B/L cerebral scattered ovoid bright signal intensity ring enhancement small nodules workup was done to exclude Meningitis, TB encephalitis, CNS lymphoma, Toxoplasmosis, HIV, Vasculitis and Demyelination. Results were negative. Steroids started and the patient improved.

Take-home message: Careful history taking and a high index of suspicion of central causes of vertigo is needed when a patient presents with dizziness.

Epiploic Appendagitis masquerading as acute appendicitis

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Introduction: Epiploic appendagitis is considered as a relatively uncommon surgical condition. We report our observational study which suggest that it is more common that appreciated.

Case description: In a weekend on call, out of 4 patients undergoing diagnostic laparoscopy for suspected appendicitis, we encountered 2 clear cases of epiploic appendagitis. These patients had CT scan suggestive of inflammatory process in right iliac fossa; the inflammatory markers were elevated. Diagnostic laparoscopy revealed appendage epilpoicae as the culprit.

Results and conclusions: Patients underwent appendicectomy and excision of the appendage with resolution of the symptoms. We conclude that this entity is much more common that appreciated. In cases of serosanguinous fluid in the abdomen and normal looking appendix, search should be undertaken not to overlook a torted appendage.

Take-home message: The patients with epiploic appendagitis tend to look well; they are excruciately tender in the area overlying the appendage. Though self-resolving, if identified, the best option is to excise the appendage for early resolution of the symptoms.

Unusual presentation of tuberculous meningitis: Two case reports

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Introduction: Chronic lymphocytic inflammation with pontine perivascular enhancement responsive to steroids: A rare central nervous system inflammatory disorder involving predominantly the pons as a distinct form of brainstem encephalitis centered on the pons, and/or the spinal cord. Usually presented with symptoms/signs referable to brainstem, cranial nerve-and/or cerebellar dysfunction. Symptoms related to long tract affections and/or spinal cord syndrome. Paresis, spasticity, plantar response, hyperreflexia, altered sensation of the extremities, decrease vibration sense, neurogenic bladder and cognitive deficits. Responsive to steroids and long term immunosuppression. MRI with contrast is a useful tool to help for early diagnosis of such cases.
Introduction: Central nervous system tuberculosis is a serious health problem worldwide and accounts for more than 7% of all cases of tuberculosis especially in developing countries with high prevalence of tuberculosis and also should be considered in high risk patients or in patient emigrated from regions with a high prevalence of tuberculosis. Tuberculouous radiculomyelitis is a complication of tuberculous meningitis which has been infrequently reported in medical literature.

Case description: Case I: A 49-year-old previously healthy Filipino female with 5 days history of fever, back pain radiating to both legs followed by acute onset of lower limb weakness and urine retention one day prior to presentation. Physical examination revealed pyrexia, alert patient, no sign of meningeal irritation and lower limb power decrease (3/5) normal exam of upper limb. Investigation showed elevated WBC in Cerebral Spinal Fluid (60% lymphocyte). Positive PPD and positive quantiferon test. MRI showed extensive enhancement around nerve roots extending cranially to lower thoracic. Patient started on anti tuberculous treatment, steroid and physiotherapy. Six month post treatment did not show significant neurological improvement, but fever respond after start of treatment.

Case II: A 27-year-old healthy Filipino female, presented with history of fever, headache, neck and back pain with vomiting, three weeks prior to presentation and was treated as case of otitis media with two different antibiotic given during two primary health care visits. Presented with one day lowe lower abdominal pain with urinary retention and body weakness. Physical exam showed lethargic patient afibrile with spastic quadriaparesis power of upper limb 4/5 and lower limb 3/5. Investigation showed cerebrospinal fluid, high WBC (90% lymphocyte), high CSF protein and low glucose. High serum ESR. MRI showed increase leptomeningeal enhancement of spinal cord extending to the pons. Patient also started on steroid and anti tuberculous drugs. Patient made good clinical recovery and discharged.

Results and conclusions: In patient with tuberculous meningitis, an early diagnosis and initiation of therapy plays a major role in preventing unnecessary morbidity and mortality. In several series, use of the steroid has been considered beneficial and should be given for secondary neurological complications, associated with tuberculous meningitis. Emergency clinician must be aware of unusual presentation of tuberculous meningitis and other different causes of lower limb weakness. Neuroimaging with MRI with and without contrast and lumber puncture is critical for diagnosis.

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Poster Presentations

Acute abdomen and septic shock in young lady treated conservatively
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Introduction: Septic shock is a life-threatening condition that is accompanied by high mortality rates. It is defined as sepsis-induced hypotension that persists despite adequate fluid resuscitation and is associated with hyperperfusion abnormalities and organ dysfunction. Blood cultures are positive in only 40% to 60% of patients with clinical manifestations of septic shock. Aggressive treatment with broad-spectrum regimens and vasopressors is mandatory to increase survival.

Case description: A 37-year-old lady presented to the emergency unit with an intense, sudden onset periumbilical pain with fever (39°C) and rigor, the last five hours. On physical examination, she was haemodynamically stable with rebound tenderness at palpation of right iliac fossa and right lateral ventricle. Abnormal laboratory tests were leukocytosis (WBC= 19.500) and elevated LDH (5790U/L). She underwent abdominal CT scan with edema and inflammation of terminal ileum loops, high turbidity of mesenteric fat and high amount of free fluid. She was surgically evaluated and admitted in internal medicine department with triple antibiotic therapy and hydration.

Results and conclusions: Septic shock is a life-threatening condition that is accompanied by high mortality rates. It is defined as sepsis-induced hypotension that persists despite adequate fluid resuscitation and is associated with hyperperfusion abnormalities and organ dysfunction. Blood cultures are positive in only 40% to 60% of patients with clinical manifestations of septic shock. Aggressive treatment with broad-spectrum regimens and vasopressors is mandatory to increase survival.

Case report: We present the case of a 39-year-old male patient with the FAP-Syndrome. He had undergone a total colectomy with ileoanal pouch reconstruction years ago. In the current history, he reported about chronic abdominal pain in the right upper abdomen with postprandial nausea. The clinical examination at the admission showed no palpable mass or tenderness in the abdomen. The laboratory tests were normal. Abdominal ultrasound showed four concrements and multiple small polyps. He underwent laparoscopic cholecystectomy. The postoperative course was uneventful.

Results and conclusions: The mucosal inspection at the histopathological examination showed more than 80 green polypoid lesions. Microscopically we classified tubular adenomas with mostly low-grade but focally with high-grade epithelial dysplasia cells. Their epithelium was predominantly of the biliary type. No invasive malignant cells have been described. Immunohistochemical staining with β-catenin showed strong positivity for cytoplasmic and nuclear expression. APC is closely connected to intestinal neoplasia. We present a rare case of multifocal gallbladder polyps in association with familial adenomatous polyposis.

Take-home message: FAP is the most common adenomatous polyposis syndrome characterized by the development of numerous colorectal adenomatous polyps. It is associated with greater risk of developing upper gastrointestinal malignancy or extraintestinal cancer. Due to previous reports and our conclusions, a simultaneous prophylactic cholecystectomy

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Gallbladder polyps in familial adenomatous polyposis
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should be performed by FAP patients, who undergo colectomy, to eliminate the risk of gallbladder neoplasia.

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Acute renal failure and severe lactic acidosis due to metformin

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Introduction: Metformin may rarely cause lactic acidosis in patients with predisposing factors of acidosis or tissue hypoxia, like acute renal or heart failure, liver failure, dehydration, alcohol consumption or serious infection. Mortality may approach 50% in these cases.

Case description: A 70-year-old lady came to the emergency unit because of vomiting and diffuse abdominal pain. Five days ago, she had visited our hospital for the same reason, with normal findings on physical and laboratory examination. Her medical history included diabetes mellitus under metformin/vildagliptin and dementia. The patient was confused and disoriented, afebrile, oliguric, with tachypnea and diffuse abdominal tenderness. Blood pressure was 130/70mmHg. Blood gases revealed severe lactic acidosis (lactate >15 mmol/L), pH = 6.84, PCO2 = 7mmHg, pO2 = 133mmHg, glucose = 57mg/dL, HCO3 < 3mmol/L. Abnormal laboratory tests included creatinine = 5.3mg/dL, urea = 152mg/dL, WBC = 17000/L, hemoglobin = 12.3gr/dL, potassium = 15mmol/L, sodium = 133mmol/L, albumin = 0.7g/dL. Blood culture showed positive BAL of Enterococcus faecalis. Sputum culture yielded mixed flora. Metformin was stopped and nitrates were given. Abdominal ultrasound (to exclude obstructive nephropathy) and echocardiography were normal.

Results and conclusions: The patient received 400mL bicarbonate 4.8%, aggressive hydration, dopamine (diuretic dose) and 160mg furosemide. Because of clinical deterioration she underwent hemodialysis. She was treated, according to guidelines, as for severe sepsis with meropenem. Blood and urine cultures were negative. On 1st day, ECG showed ischemic lesions, which resolved with nitrates. Abdominal CT was normal. The patient remained afebrile after 1st day (low grade fever). Overall, the patient underwent three hemodialysis sessions (resistant severe lactic acidosis, low bicarbonates). On 2nd day, she was well oriented. She was discharged 8 days later with urea = 59mg/dL and creatinine = 1.6mg/dL. After 20 days, creatinine was 1mg/dL.

Take-home message: Metformin may be a cause of severe lactic acidosis, disproportionate to the degree of renal failure, in patients with previous normal renal function and acute dysregulation. Hemodialysis is a lifesaving therapeutic intervention in these patients.

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Invasive pulmonary aspergillosis in three nasopharyngeal cancer patients

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Background: The importance of invasive pulmonary aspergillosis (IPA) in patients with haematological malignancy or solid organ transplantation has been highlighted, but IPA has been neglected in the patients with nasopharyngeal cancer (NPC).

Case 1: A 58-year-old woman of NPC had fever and cough due to right lung consolidative pneumonia. Initial laboratory data showed WBC 300/µL, platelet count 77000/µL, procalcitonin 26.64ng/ml, CRP 310.3mg/L, lactic acid 4.2mmole/L, and albumin 2.2g/dL. Sputum culture yielded Pseudomonas aeruginosa and yeast-like organisms. Blood Aspergillus antigen index revealed 0.74 (positive). Chest CT showed reticular micronodules and interstitial infiltration over both lungs. Piperacillin/tazobactam, levofloxacin and voriconazole achieved improvement. Two weeks later, blood Aspergillus antigen index became 3.69. He was discharged after 22 hospitalization days with oral voriconazole for maintenance therapy.

Case 2: A 51-year-old man of NPC had fever, cough and dyspnea due to bilateral interstitial pneumonia. Laboratory data showed WBC 10400/µL, band form 12%, platelet 341000/µL, CRP 470.5mg/L, lactic acid 1.6mmole/L, and albumin 4.2g/dL. Sputum culture yielded mixed normal flora. Blood Aspergillus antigen index revealed > 784 (positive). Chest CT showed reticular micronodules and interstitial infiltration over both lungs. Amoxicillin/clavunanic acid was used but was changed to piperacillin/tazobactam as worsening pneumonia by Klebsiella pneumoniae and septic shock developed. Blood Aspergillus antigen index revealed 0.74 (positive), but voriconazole was not administered as improved condition. The patient was discharged after 19 days of hospital stay with residual interstitial process over bilateral lungs.

Conclusions: In conclusion, we reported 3 NPC patients with IPA-related worsening pneumonia. Blood Aspergillus antigen was positive during early course in 2 patients, but was negative in one patient who showed positive BAL Aspergillus antigen in the late course. IPA should be considered early in the NPC patients with pneumonia.

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Differential diagnosis of anemia in 88 years old: Unexpected findings and geriatric dilemmas

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We report a case of functionally independent and cognitively intact 88-year-old male, suffering from anaemia with suspicion for UGI bleeding. Diagnostic evaluation revealed a small bowel tumor as the source of bleeding. Our presentation will include a discussion about small bowel tumors as a relatively rare entity. The patient was operated on and the tumor was diagnosed as a distant metastasis of melanoma. Further evaluation revealed a relatively small primary melanoma tumor on the posterior part of right heel. The patient was not aware of the tumor until the diagnostic investigation. Radical Surgery was proposed as the choice of treatment with high probability of wheelchair-bound state as the functional outcome. Further discussion is related to the dilemma of choosing between aggressive treatments versus preserving quality of life in elderly persons. Modern options of melanoma treatment and their suitability to the elderly patient are presented together with a review of the literature.

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Successful outcome in perinatal intravaginal torsion of testis in neonate: Long-term outcome

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Introduction: Perinatal testicular torsion can be intravaginal or extravaginal. Extravaginal torsion can be managed in an elective manner. Intravaginal torsion needs an urgent operation to maximize the viability of the testis. The history is vital to distinguish between the two diagnoses. We report a case in which a perinatal intravaginal torsed testicle was successfully salvaged due to a timely operation. This was a retrospective review of a case and literature review of perinatal testicular torsion.

Case description: A term baby was transferred to a tertiary pediatric surgical unit in the form for surgical management of exomphalos minor. The child was noted to have normal testes. On the seventh day of life, he was noted to have a firm swelling in his right scrotum with purple discoloration. He was promptly reviewed by the surgical team. A perinatal torsion of intravaginal type was suspected and he was booked for emergency exploration. The surgical findings were 1) significant edema of the right scrotal wall, 2) a thickened tunica vaginalis and small volume of hemolyzed fluid, and 3) a bluish and congested torsed testicle in intravaginal plane. Testis was de-rotated and color returned within 5 minutes. A three-point testicular fixation was performed bilaterally. He was reviewed in clinic for the following 2 years and found to have equal growth of the testicles, both of which were appropriately positioned within the scrotum.

Results and conclusions: This case highlights the importance of being aware that perinatal torsion can be extravaginal or intravaginal. The patient history is important to distinguish between the two diagnoses as proven by the above case. A positive outcome can be achieved with judicious assessment and emergent management of perinatal intravaginal torsions.

Take-home message: Clinicians should maintain a high level of suspicion of intravaginal torsion in all cases of perinatal testicular torsion.

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Prostatic abscess: An unusual presentation

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Introduction: Prostatic abscess is an uncommon complication of acute prostatitis. While these two conditions may have the same symptoms, prostatic abscess diagnosis rely largely on suspicious examination and imaging. In this study, we describe a case of uncommon presentation of prostatic abscess.

Case description: A 45-year-old diabetic male presented with history of fever for two months and denied any lower urinary symptoms (LUTS). Digital rectal examination was unremarkable with a normal sized, non-tender prostate. Urine analysis results showed leukocytes in excess but no red blood cells. After initiating a fever of unknown origin (FOU) workup, a prostatic abscess was discovered on abdominal ultrasound and confirmed with contrast enhanced CT scan. Once the diagnosis was achieved, intravenous antibiotics were started. The patient underwent a minimal transurethral resection of the prostate (TURP) and de-roofing of the abscess with an uneventful recovery period.

Conclusion: It is important to consider prostatic abscess in the differential diagnosis of fever of unknown origin since it may be present in an atypical clinical picture.

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Same old peristomal dermatitis, but what’s causing it?

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Introduction: Prevalence of peristomal dermatoses ranges between 6-80%1 and more commonly affects patients with urostomies and ileostomies, than with colostomies. Most common causes include irritant contact dermatitis from urine/faeces, mechanical dermatitis, chronic papillomatous dermatitis, seborrhoeic dermatitis and allergic contact dermatitis.

We report an unusual case of allergic contact dermatitis to printing ink on stoma bag which has not knowingly been reported before.

Case description: A 66-year-old male, presented with a pruritic rash under colostomy bag, not responding to topical emollients and steroids. Examination findings were of an eczematous rash with no obvious leak at stoma site or from bag. He was not on any medication such as Nicorandil which might be contributing to peristomal dermatitis/ulceration. Provisional diagnoses were allergic contact dermatitis and irritant contact dermatitis. First patch test for standard European battery was negative. Histopathology had shown eczematoid spongoid dermatitis, consistent with allergic/irritant contact dermatitis. He was treated with several emollients, topical Trimovate®, Betnovate® and topical 0.1% Tacrolimus; however, it had made no significant difference even by occlusion with hydrocolloid dressing.

Subsequently he was patch tested with colostomy bag tied on to forearm for a week. It was divided in five patches:

1. Inner sticky pad
2. Outer sticky pad
3. Bag
4. Printed area of bag and
5. Joined area of bag.

Surprisingly he had shown strongly positive reaction only to number 4 but not to any other part of the bag. It was thought that he was allergic to that particular ink and not to bag itself as he did not show any reaction to un-branded part of the bag.

He was advised to cover the printed under surface of the colostomy bag with Micropore® and to continue Hydromol® as barrier emollient and Mometasone furoate ointment for flare ups. His problem completely resolved with covering inked part of colostomy bag with Micropore® and he was discharged back to GP. Enquiry had been made to manufacturer regarding materials used in ink, as patch test for standard European battery were negative, however manufacturer of the colostomy bag had passed it on to the manufacturer of the ink and no further information had been received to this date.

Conclusion: Allergic contact dermatitis had been reported secondary to ostomy bag/pouch, sealing rings, strapping, deodorizers, adhesives, skin cleansers and topical emollients and ointments. Patch testing had always been the key investigation in these cases. Most reported cases had shown sensitivity to ‘epoxy resin’ which is a component of stoma bag itself.

Allergic contact dermatitis had also been reported to karaya gum seal ring2, colophony & benzyl peroxide3, tinuvin P® & 2-benzotriazolyl, di-aminophenylmethane and rubber seal surrounding the bag4. Other cases had shown sensitivity to adhesive tapes, polyisobutylene (adhesive ring of ostomy bag), adhesive remover wipes, stomahesive paste®, Dansac® soft paste, gentzare E5®, balsam of Peru, cinnamic aldehyde, geraniol, benzyl alcohol, isoeugenol, propylene glycol and DOR ostomy deodorant®. However, so far we had not noted any case report showing sensitivity to printing ink on colostomy bag. It is unfortunate that we are still unable to get the information on components of ink however, in suspected cases it would be worth covering the printed under surface of colostomy bag to overcome possible allergic contact dermatitis. Recommending manufacturers of stoma care products to
Avoid printing on the surface in contact with the skin would also be another feasible alternative.

**Take-home message:**

1. Allergic contact dermatitis is one of the common causes of peristomal dermatitis.
2. Patch test is important if allergic/irritant contact dermatitis is suspected.
3. Stoma bag can be used directly for patch testing if commercially available patch tests batteries do not show any positive result.
4. Although quite rare, patients can develop sensitivity to printing ink on stoma bag and covering printed surface can be considered if clinically suspected.

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**Acute pulmonary embolism in a dengue fever patient co-infected with influenza B**

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**Introduction:** The main pulmonary embolism is a blockage of blood flow to the lungs by a blood clot which is composed of clumped platelets and condensed fibrin lodged into an artery in the lungs. A condition associated with thrombotic events due to loss of endothelium non-thrombogenic protective factors and severe dehydration might occur in the early course of severe dengue, thereby increasing the risk of embolic formation. We report acute pulmonary embolism in a severe dengue patient co-infected with influenza B, which might additionally predispose to an acute embolic event.

**Case description:** This 71-year-old diabetic woman with hypertension suffered from the dizziness, episodic fever, and general weakness since September 13, 2015. The data of dengue virus IgM, IgG and NS1 antigen were all positive. The presenting platelet count was 11000/uL. She felt worsening malaise, dizziness, anorexia, and newly developed dyspnea. The brain CT did not indicate obvious lesion except mild atrophy. The chest X-roentgenogram revealed the opacity in left lower lung field. Abnormal liver function tests were noted, including S-GOT (AST), 1526 U/L; S-GPT (ALT), 709 U/L; total bilirubin, 2.71 mg/dL and direct bilirubin, 1.84 mg/dL. Under the impression of severe dengue with pneumonia, she was admitted for the further management. Antibiotic therapy with cefuroxime was given. However, the patient had worsening dyspnea and tachycardia 5 days later. Laboratory data showed elevated lactate (4.1 mmole/L), hypoxemia with mild decrease PaO2/FIO2 ratio, and elevated D-dimer (3271 ng/mL). CXR showed resolution of pneumonia patch. As suspected pulmonary embolism, chest CT was arranged, which revealed partial thrombosis of right pulmonary artery at superior lobar branch. Therefore, she was admitted to the intensive care unit. In addition, the result of rapid influenza diagnostic test for influenza B antigen was positive. A 5-day course of oseltamivir and antibiotic therapy with levofloxacin were given. After treatment, fever subsided and dyspnea was improved. Follow-up platelet count rose to 91000/uL. Then, she was transferred to ward. After heparin therapy, subsequent daily warfarin was titrated to daily 2.5mg to achieve the desired prothrombin time ratio. As stable condition, she was discharged after 16 days of hospitalization.

**Conclusion:** Pulmonary embolism has been reported in association with dengue fever or severe influenza, particularly influenza A(H1N1). Coexistence of severe dengue, influenza B and acute pulmonary embolism was sparsely reported before. Awareness for these complications should be recommended to all practitioners who treat patients with severe dengue fever, particularly co-infected with influenza.

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**Tracking the evolution of NAFLD through a non-invasive lipidomic test that accurately discriminates NASH from steatosis**

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**Objectives:** Nonalcoholic fatty liver disease (NAFLD) includes a spectrum of histological phenotypes including steatosis, steatohepatitis (NASH) and fibrosis. While liver biopsy is the reference for diagnosis, it is invasive and associated with procedural risks and sampling variability. There is urgent need for a noninvasive diagnostic procedure. Recently, we have described a serum-based lipidomic signature associated with NAFLD able to fulfill these unmet diagnostic needs by: differentiating NAFLD from healthy cohort; discriminating between steatosis and NASH. The aim of this study is to validate this noninvasive assay using blind-histology as a reference standard and apply it in the follow-up of the patients.

**Method:** Thirty patients were enrolled as a blind, biopsy-proven NAFLD cohort, collecting serum at the time of liver biopsy. Patients were prescribed hypocaloric diet (1500kcal/day) and aerobic exercise (30-60min/day), monitored for 2-5 years, when a serum sample was collected. Metabolic syndrome was assessed based on the presence of at least three of the conditions listed by the NCEP ATPIII. The lipidomic test was based on 467 biopsy-proven patients and two BMI-dependent logistic regression algorithms discriminating between: NAFLD-healthy liver (assay name: OWLiver Care); and NASH-steatosis (OWLiver). The diagnostic performances of both assays were assessed by the ROC curve: 0.90 ± 0.02 and 0.95 ± 0.01, respectively.

**Results:** Applied to the independent biopsy-proven cohort (33% female, weight: 86 ± 15 kg; BMI = 32 ± 5 kg/m²), the test diagnosed correctly 28 out of 30 patients, misclassifying one patient having NASH with NAS score = 2, but presenting metabolic syndrome; and one patient as having...
Mirtazapine induced steatosis

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Introduction: Mirtazapine is a commonly used drug indicated for the treatment of severe depression. It works as a presynaptic α2-adrenoceptor antagonist which increases central noradrenergic and serotonergic neurotransmission. Although steatosis is not a noted side effect or risk in the British National Formulary, we present a case of mirtazapine induced steatosis in a 48-year-old office worker in the absence of any other risk factors, discuss management options and review the literature associated with drug induced steatosis.

Case description: A 48-year-old woman with a past medical history of pernicious anaemia, hypertension and depression was admitted with a two day history of painless jaundice and a three week history of peripheral oedema and lethargy. No other stigmata of liver disease were present. Medications included once daily Ramipril 2.5mg and Mirtazapine 15mg (recently started). She denied any alcohol use/protected sex/recent travel. On admission, her bilirubin level was 199µmol/L (normal <26µmol/L), eventually peaking at 320µmol/L within four days and her alkaline phosphatase level was 158U/L (normal 35-100U/L). Full liver screen was normal.

Results and conclusions: Liver ultrasound and CT imaging of the abdomen/pelvis did not yield a cause for her acute jaundice. An ERCP with sphincterotomy and balloon trawl was also negative. Subsequent liver biopsy indicated marked steatosis with active steatohepatitis and early fibrosis which were not consistent with large bile duct obstruction. Experimentally, and with no other identifiable cause for her worsening jaundice, her mirtazapine was stopped. Her liver function results improved immediately with notable improvements in her bilirubin and ALP levels. She subsequently made a full recovery.

Take-home message: We demonstrate a case where no autoimmune/anatomical infectious or alcohol pathology accounted for the significant steato-hepatitis. Furthermore, with withdrawal of Mirtazapine, the patients’ liver function rapidly improved, giving a Naranjo score of 7, thus suggesting a highly probable adverse drug reaction induced by Mirtazapine. Mirtazapine induced hepato-toxicity is rare, probably owing to toxic intermediates following cytochrome p450 metabolism. Acute steatosis is even rarer, and may reflect weight gain caused by the offending drug. We conclude that drug causes should always be sought following exclusion of all other causes.

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Usefulness of repetitive transcranial magnetic stimulation for the recovery of central cord syndrome

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Objectives: Repetitive transcranial magnetic stimulation (rTMS) can modulate neuronal circuits and also enhance spinal cord plasticity. Our aim of this study was to delineate the effect of rTMS on the functional recovery of upper extremity in patients with incomplete spinal cord injury, especially central cord syndrome (CCS), and detect the changes of spinal cord tracts crossing the lesion by diffusion tensor imaging (DTI).

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Management of buried penis syndrome: The novel therapeutic DJ-SAM (Deepak Jumani-Sesame Arginine Metformin) approach

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Objectives: Buried penis (hidden penis) is a congenital or acquired condition in which the penis is partially or completely hidden below the surface of the skin. It is an unusual, difficult-to-treat condition that presents a unique clinical challenge. It is an acquired condition in adulthood, most commonly due to predisposing factors such as morbid obesity and diabetes mellitus which are becoming increasingly prevalent, which suggests a potential increase in the incidence of this condition. Although no specific approach is applicable to all patients, a combination of various techniques may be applied. The use of L-arginine gel for erectile dysfunction is well documented, however the use of sesame seed oil applied topically for penile lengthening has not been reported. Both the ingredients are routinely used and have no known side-effects and are being studied for penile lengthening.

Methods: 24 patients in age group 31-45 years, BMI ≥ 36 were administered Metformin SR 1gm/OD, L Arginine 3gm OD along with Sesame seed oil (food grade) and 5% L arginine for local application on the shaft of the penis for 12 weeks (DJ-SAM regime). The treatment for the comorbid diseases like diabetes, dyslipidaemia, hypertension, Vitamin D deficiency, COPD, UTI continued as per current standard of care.

Results: The patients were on low carbohydrate, high protein diet and exercise, but were unable to adhere to the exercise regimen. The patients were motivated and adhered to the DJ-SAM therapeutic regimen. Patients reported an increase of penile length to an extent of 2.5 ± 0.56 inches. The changes in the BMI were statistically insignificant.

Conclusion: We postulate that sesame oil along with L-arginine for its topical properties could account for the lengthening of the penis in obese subjects with buried penis. The results of this pilot study as proof in concept highlights the concept of pharmacological modulation in penile lengthening. Metformin in high BMI patients would have a role as a metabolic hormonal regulator which needs further exploration. Although the exact mechanism of action of sesame seed oil for penile lengthening, is still not known, this is the first study that demonstrates the use of sesame seed oil as a therapeutic agent along with L-arginine gel for topical application.

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Dasatinib related pericardial effusion requiring pericardial drainage

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Introduction: Dasatinib is an oral Bcr-Abl and Src family tyrosine kinase inhibitor approved for use in patients with chronic myelogenous leukaemia (CML) and Philadelphia chromosome positive acute lymphoblastic leukaemia (ALL). Its common side effects include myelosuppression, oedema, diarrhea and nausea. It has also been associated with the formation of pleural and pericardial effusions. As a result, Dasatinib is to be avoided in patients with pre-existing effusions or predisposition to respiratory or cardiovascular disease.

Case description: A fit 62-year-old pilot with no relevant medical history was diagnosed with CML in 2014, and commenced on Dasatinib therapy (100mg OD). A subsequent trans-thoracic echocardiogram (TTE) revealed normal ventricles and cardiac valves. There was however a mild to moderate global pericardial effusion, without haemodynamic compromise. This was regularly monitored with TTEs and remained stable until May 2016, where it measured 2.1 cm posteriorly around the LV and 1.0 cm around the RV. Due restrictions imposed by the Civil Aviation Authority in the UK, the patient was referred for pericardial window procedure, prior to being considered fit for flying.

Conclusions: Dasatinib is known to cause pleural and pericardial effusions. This has been reported in patients without any predisposing factors.1) The link with pericardial effusions has been proven with robust statistical analysis.2) No specific mechanism has been proposed but an immune mediated reaction or off target inhibition of growth factors may be involved.3) Management includes dose interruption or reduction, and/or treatment with steroids.3) Our case report re-enforces that Dasatinib is an important cause of pericardial effusion and TTE is the modality of choice for follow-up. Pericardial window and drainage may be needed in patients where this prohibits them from undertaking employment.

Take-home message: Dasatinib related pericardial effusions are a documented side effect of therapy. One should be vigilant in monitoring patients on the drug as effusions may progress over time and require intervention. TTE is the monitoring modality of choice. As far as we are aware this is the first case report for surgical intervention in a patient with Dasatinib induced pericardial effusion.
References


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Case Report: Kikuchi disease and lupus erythematosus in a schizophrenic patient with extreme anorexia

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Kikuchi-Fujimoto Disease (KFD) is a rare benign condition of necrotizing histiocytic lymphadenitis. The manifestations include localized lymphadenopathy, fever and weight loss. KFD has been described in association with systemic lupus erythematosus (SLE).

This case describes a patient whose anorexia and deterioration were first interpreted as a manifestation of her schizophrenia. Diagnosis of a rare organic treatable disease resulted in improvement in her life threatening condition.

A 36-year-old woman with schizophrenia treated with depot haloperidol experienced a general deterioration, extreme anorexia and fever up to 38°C for few months. On examination she was cachectic weighing 33kg and confined to bed. She had malar rash, cough, fever, and enlarged axillary lymph nodes. Primary laboratory tests revealed pancytopenia and LDH 1254U/L. For suspected atypical pneumonia, therapy with ceftriaxone and azithromycin was started with no improvement. Further lab tests revealed: positive ANA with titer of 1:60, elevated anti-smith, anti-RNP levels more than 200U. Anti-double stranded DNA (dsDNA) and anti-Smith, anti-RNP was negative, C3: 62mg/dL, 24 hour protein urine collection showed 3.8g with no casts in urinary sediment.

A total body CT scan revealed pleural effusion, enlarged axillary and mediastinal lymph nodes. A biopsy form a right axillary lymph node revealed histiocytic necrotizing lymphadenitis. The diagnosis of KFD associated with SLE was made based on a malar rash, pleural and pericardial effusion, nephrotic range proteinuria, positive ANA, Anti-Smith, Anti-RNP, pancytopenia and a positive coombs test. The pathology result was consistent with KFD.

Further follow up cardiac echocardiogram showed a new large pericardial effusion with right atrial compression and tachycardia. Parallel to high dose IV methylprednisolone treatment, a pericardiocentesis was performed and only 250ml were aspirated because of septations. A stereotomy with a pericardial window was performed. Following this procedure the patient’s condition improved. Therapy with azathioprine 75mg/day and Prednisone 40mg/day was started. A second CT scan showed that the previously shown lymph nodes disappeared.

Physiotherapy was started on admission and continued ongoing. Five months after admission the patient maintains a significant improvement in her daily function and activity. She gained 15kg. There was a decrease in her proteinuria and increase in the C3 level to 93 with a normal blood count.

To conclude, we describe a case of KFD, a rare disease evolving in a SLE patient. Both diagnoses were made relatively late in the course of a chronic schizophrenic patient, leading to the appropriate therapy and saving her life.

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Lung cancer diagnosed by a metastatic lesion in the mandible

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Introduction: Lung cancer is the second most common cancer in the UK accounting for 13% of all new cases. It is the second most common cancer in both males and females. Lung (12.6%) is the second most common primary to metastasize to the jawbones preceded by breast (21.8%). Distant metastases are present in the late stages of the disease. It is reported that the prognosis following presentation of oral metastasis is poor with the mean survival time 7.3 months. Bony metastases are rarely asymptomatic and in 2.3% of cases the bone metastasis is the initial presenting complaint as presented here.

Case description: 61-year-old female presented to A&E at Liverpool University Dental Hospital complaining of pain from the left mandible. This had been present for five months and she had undergone two extractions, which had not relieved her symptoms. The patient was a previous smoker of 20 per day for 40 years. She had recently presented with a persistent cough to her GP, who prescribed penicillin. The clinical examination together with poorly defined radiographic appearance caused concern and a CBCT was requested. A biopsy was performed; the results indicated the lesion to be a metastatic deposit from adenocarcinoma of the lung.

Results and conclusions: Given the findings the patient was referred urgently to the lung cancer team who completed a contrast CT scan which identified a large right apical mass with areas of necrosis consistent with neoplastic disease. Borderline mediastinal and supraclavicular lymph nodes and possible suspicious lesions were identified in the left adrenal gland. Given these findings the tumour was staged T4 N2 M0 (N3M1b if supraclavicular node and adrenal lesion involved). The radiologist reporting was unaware of the suspected metastatic lesion in the mandible.

Take-home message:

• The diagnosis of metastatic lesion may be difficult owing to their rarity and clinical presentation.
• There is the potential for misdiagnosis as a benign lesion or odontogenic pathology.
• Therefore a biopsy is essential especially in patients with a known previous history of malignancy.
• Health professionals should be aware of the possible presence of jaw metastasis in patients with atypical presenting symptoms.

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Common digestive symptoms as rare presentation of a prostatic cancer

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**Introduction:** Weight loss and fatigue are frequent symptoms as are dysphagia and vomiting. Looking for diagnosis, one would think first about gastric or oesophageal pathology. Combined with abdominal mass, upper abdominal cancer would be a good main hypothesis. We describe here a case of prostatic cancer in a healthy patient showing no urinary symptoms.

**Case description:** A 54-year-old man, without medical history, is admitted to the ER for weight loss, fatigue, dysphagia to solids and pre-cocious postprandial vomiting that begun a month ago. Weight loss reaches about 10kg. Clinical examination shows multiple pulseless hard abdominal masses, larger than 5cm and discrete lower limbs oedema. Peripheral pulses are present and symmetrical. Blood analysis reveals severe anemia (Hb 5.6g/dl), kidney failure (creatinine 1.7mg/dl, GFR 40ml min-1), increase in LDH (400UI/ml) and lactate (4.4mmol/l) levels. Blood transfusion and IV-hydration restore Hb-level to 9.2g/dl but do not correct lactatemia or kidney failure. Abdominal CT (figure 1A-1B) confirms multiple tumors as being retro-peritoneal lymph nodes reaching sizes up to 10cm, along with a bilateral ureterohydronephrosis due to compression. Prostate is irregular and numerous sclerotic bone metastases of the spine are showed. PSA level is 16033mg/l (nl < 5).

**Results:** A prostatic adenocarcinoma is confirmed by lymph node biopsy. Scans (figure 2A-2B) done 40 days after introduction of Degarelix (GnRH antagonist) show a major decrease in tumor volume (465%). No chemotherapy was initiated due to lack of follow-up from the patient. PSA level is then 40mg/l. Anemia stays non-regenerative due to bone marrow involvement. Clinical symptoms resolved.

Implantation of penile prosthesis (3-piece inflatable) for erectile dysfunction in a patient with left orchiectomy for left undescended testis: A cosmetic approach

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Erectile dysfunction (ED) results from various functional and organic causes. Its management has always been a challenge to urologists and other physicians. After failing to respond to medical and intracorporal injections, patients might resort to surgical penile prosthesis implants to improve their sexual performance. Apart from functional outcome, cosmetic results also concern such patients. Cosmetic is also affected in patients with undescended testis or those who underwent an orchiectomy. We discuss the case of a diabetic 59-year-old gentleman with a left undescended testis who was receiving medical treatment for longstanding ED with unsatisfactory results of recent. The patient was counseled appropriately and his medical conditions were optimized prior to any possible surgical intervention. A planned laparoscopic orchiectomy was followed 5 months later by implantation of a 3-piece penile prosthesis device, with successfully placing the pump in a fashioned dartos pouch in the empty left hemiscrotum, attaining both
satisfactory functional and cosmetic results for the patient. The prosthesis and the implantation of the pump in the empty left hemiscrotum helped the patient attain satisfactory sexual function and a cosmetic and textural resemblance of a full left hemiscrotum the likes of having a normal left testis. This approach boosted his self-confidence about his sexual performance and image, as reported by the patient after years of erectile dysfunction and having an undescended left testicle. Attention should be paid when planning and executing any surgery that will impact a patient’s sexual function. Allowing for surgical innovation and studying the current setting could result in great results beyond the presenting complaint. The ability to restore a male patient’s sexual function with implantable prosthesis along with good cosmetic results of the penis and the hemiscrotums can enhance the patient’s final experience and level of satisfaction.

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Nocardia cyriacigeorgica pneumonia in ulcerative colitis patient receiving infliximab despite TMP/SMX prophylaxis

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Introduction: Infliximab is an effective therapy for induction and maintenance of remission in patients with refractory ulcerative colitis (UC). Treatment with TNF-alpha inhibitors is associated with an increased risk of infection. In this case, we will discuss an uncommon cause of infection associated with infliximab therapy despite antibiotic prophylaxis.

Case description: 78-year-old man with history of UC maintained on infliximab infusion every 8–weeks was found to have pulmonary infiltrates on chest computed tomography (CT). His UC history was notable for recent Pneumocystis jiroveci pneumonia while on infliximab requiring intravenous Trimethoprim/Sulfamethoxazole (TMP/SMX) treatment for 21 days followed by single strength oral TMP/SMX for secondary prophylaxis. On evaluation, the patient endorsed weakness, generalized fatigue, and shortness of breath with activities. His lab was notable for mild anemia in the absence of leukocytosis.

Result and conclusion: Bronchoscopy was performed and bronchial secretions were sent to the microbiology laboratory for culture. After 30 days of incubation, the culture returned partially acid fast, branching, Gram-positive rod shaped bacteria consistent with Nocardia cyriacigeorgica. The isolate was susceptible to TMP/SMX (0.25/4.75μg/mL). Patient was started on therapeutic dose of oral TMP/SMX at 5 mg/kg of the trimethoprim component for 6 months. Infliximab was subsequently held. Repeat chest CT scan at 6 months showed resolution of patchy ground glass and nodular infiltrates.

Take-home message: This case highlights the importance of considering Nocardia infection in ulcerative colitis patients receiving infliximab therapy presenting with shortness of breath and new infiltrates on chest imaging. In addition, patients receiving prophylaxis with TMP/SMX are still at risk for this infection because the effectiveness of prophylactic doses of TMP/SMX in preventing disease remains unclear.

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Cytomegalovirus pneumonia coexisting invasive pulmonary aspergillosis in an old aged diabetic patient after prolonged intensive care

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Introduction: Cytomegalovirus (CMV) pneumonia is an important cause of morbidity and mortality in transplant recipients, hematological malignancies on chemotherapy, and HIV-infected patients. Invasive pulmonary aspergillosis (IPA) occurs primarily in patients with severe immunodeficiency. Both infections have dramatically increased in the patients with impaired immune state associated with critically ill patients and those with chronic obstructive pulmonary disease.

Case description: The 93-year-old diabetic woman was admitted to the intensive care unit (ICU) due to urosepsis. Antibiotic therapy with piperacillin-tazobactam was given. As clinical progression to profound shock and multiple organ failure, high-dose vasopressors, hydrocortisone and fluid resuscitation were given. After short course of continuous venovenous hemofiltration was used, the hyperkalemia and metabolic acidosis were improved. The patient was maintained on regular haemodialysis. However, active gastric and duodenal ulcers with bleeding were identified by endoscopy. Hemostasis and high-dose pantoprazole infusion were given. As stable condition after ICU stay for one month, she was transferred to respiratory care center for weaning ventilator. However, CXR showed partial consolidation over bilateral lung, favoring inflammatory process. The sputum culture showed Acinetobacter baumannii and Aspergillus species. Meanwhile, the results of CMV-PCR for serum and sputum samples were positive. Blood CMV virus load was 8140IU/mL. In spite of one week therapy with imipenem and ganciclovir, the sepsis and pneumonia did not improve. The CXR still showed severe pulmonary edema and high airway pressure was noted. The serum Aspergillus galactomannan (GM) antigen revealed > 5.59 index (normal, < 0.5). As rapid deterioration of clinical conditions, the families agreed palliative treatment and she died after 43 days of hospitalization.

Conclusion: Early diagnosis and treatment of CMV infection is important in view of the poor prognosis of established infection. Strategies include pre-emptive therapy when viral load increases or CMV-PCR becomes positive on serial monitoring. As cultures for Aspergillus spp are positive only in few cases, serum GM assay is useful for early diagnosis of IPA even before the clinical symptoms and signs becoming obvious. Old age, diabetes, hemodialysis, steroid use and prolonged ICU stay might predispose our patient to develop IPA and CMV pneumonia. Voriconazole was not given for our patient in time, which also highlighted the importance of early diagnosis and therapy.

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Buerger’s disease

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Introduction: This case demonstrates some of the features associated with Buerger’s disease. This is a disease affecting the distal arteries
causing ischaemia to the limb. It is associated with young patients who are heavy smokers.

**Case description:** A 27-year-old gentleman, who smokes heavily was admitted with ulcerated and necrotic toes. An angiogram was done which showed the coxcomb appearance of the more distal arteries classical of thromboangitis obliterans, this is what causes the ischaemia. He was treated with smoking cessation and a standard five day course of Inoprost with good symptom relief.

**Results and conclusions:** Though Inoprost has good symptomatic relief the disease will continue to progress until the patient has completely stopped smoking as the autoimmune reaction is triggered by a component within the cigarette. If these patients do not stop smoking they are likely to require an amputation of the limb.

**Take-home message:** These patients require smoking cessation assistance. If these patients do continue to smoke, they often require amputation, therefore early counselling with an amputation service/physiotherapists is useful.

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**Osteosarcoma during pregnancy - case report**

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In Poland, sarcomas represent about 1% of all cancer diseases. Every year about 800 new cases are diagnosed. Osteosarcoma is the most frequently recognized primary malignant bone tumor.

Osteosarcomas are diagnosed more frequently in children and adolescent males, whereas in pregnant women they are extremely rare. We present a case of a 29-year-old Nepali male who presented to our emergency department with features of acute psychosis. Later on with diagnostic imaging like CT head and MRI brain was discovered to have multiple neurocysticercosis one in the right frontal region and the other in the right inferior cerebellar region. Patient was admitted to the inpatient and was managed with antithelminthic, antipsychotic and steroids.

**Results and conclusions:** Patient condition improved and he is on regular follow up in psychiatry and neurology clinic.

**Take-home message:** Although it is rare for neurocysticercosis to present with psychosis, always keep a high index of suspicion especially in patients from endemic areas.

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**Inflammatory local recurrence during TC chemotherapy after breast-conserving surgery: a case report**

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**Introduction:** Inflammatory local recurrence after breast-conserving therapy is very rare and these patients always have poor prognosis. In common, the recurrence happens in a median of 65 months for lymph node negative patients. Fast recurrence is usually be considered correlated with ER status, lymph node status and tumor size.

**Case description:** A 70-year-old female patient had left breast conserving surgery in PUMCH on 2016-4-19, pathological results showed an IDC (triple negative) and the margins of the tumor were clear. Then she began chemotherapy (Taxol±CTX, 3 week regimen) on 5-22. At the end of June, she had a skin lesion on the left breast. We continued chemotherapy to 7-22, TC4 in total. During this, the patient’s skin lesion turned bigger and the therapy had no effect on this. We took the skin for biopsy and the skin and lymphatic was filled with breast cancer metastases.

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Bilateral empyema thoracis due to Lactobacillus gasseri. Has anything changed since Hippocrates?

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Introduction: Lactobacilli are common commensal bacteria found in the gastrointestinal and genitourinary tract. Although they are usually thought to be non-pathogenic, there have been few reported cases that showcase severe infections caused by these microorganisms. This is the first reported case of a bilateral empyema with bacterial cultures growing only Lactobacillus gasseri in the setting of undiagnosed type 2 DM.

Case description: Previously healthy 49-year-old male, presented to the emergency room with a 3 month history of a productive cough and bilateral lower extremity edema. He denied any smoking history, history of recent or recurrent pneumonia or sick contacts. Upon presentation, he was hypoxic and tachycardic. On physical examination patient appeared of recent or recurrent pneumonia or sick contacts. Upon presentation, he showed bilateral lower extremity edema. He denied any smoking history, history of recent or recurrent pneumonia or sick contacts. Upon presentation, he was hypoxic and tachycardic. On physical examination patient appeared

Results and conclusions: White count was 23.8x10^9/L, Hemoglobin A1c is 14.7%. HIV test negative. CT-chest showed a large right sided pleural effusion containing pockets of gas consistent with empyema, along with focal airspace disease within the lingual and left lower lobe. Patient underwent a right sided VATS procedure and two chest tubes were placed. Intraoperatively 1300mL of gray foul-smelling material was drained. Repeated CT-chest showed left lung consolidation and effusion and a chest tube was placed on the third day after treatment - in the form of a strip of outer inner (medial) edge of the nail plate, surrounded by a tense, hot, swollen and congested skin.

Take-home message: Lactobacillus gasseri is an unusual cause of empyema. Management requires adequate drainage.

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New friend, old foe: Anti-interleukin-6 agents increase risk of Pneumocystis jirovecii pneumonia

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Introduction: Anti-interleukin-6 agents such as Tocilizumab (Actemra) are increasingly being used in patients with rheumatoid arthritis who did not have good clinical response to TNF (Tumor necrosis factor) inhibitors. Interleukin-6 is a key cytokine in the pathogenesis of several autoimmune disorders. Pneumocystis jirovecii is an opportunistic pathogen that causes pneumonia in immunocompromised patients such as HIV positive individuals with low CD4 count. There is limited data about the risk of pneumocystis pneumonia associated with newer biological agents. We report a rare case of Pneumocystis jirovecii pneumonia in a rheumatoid arthritis patient without HIV, associated with anti-interleukin-6 agent.

Case description: A 65-year-old female with rheumatoid arthritis, presented with progressive shortness of breath over a period of 3 weeks. She was receiving methotrexate and a biological interleukin-6 receptor blocker (Tocilizumab). She had a non productive cough and gradually progressing shortness of breath. She did not have fever or rigor. CT Chest angiogram was negative for pulmonary embolism, but did note extensive diffuse ground-glass opacity throughout both lungs, predominantly in the upper lobe. Hemoglobin was 14.9g/dL. White count 13.4X10^9/L, platelet count 147X10^9/L, Creatinine 0.83mg/dL, CRP 8.8mg/L.

Results and conclusions: Her clinical picture was suggestive of Pneumocystis jirovecii pneumonia. Bronchoalveolar lavage cultures, bacterial, fungal, viral and mycobacterial were negative. Pneumocystis jirovecii PCR was negative. Serum Beta-D-Glucan, a component of cell wall of Pneumocystis jirovecii was high (>500pg/ml) and elevated levels have

Hirudotherapy in the treatment of periangual felon

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Introduction: The most common form of acute purulent inflammation of the tissues of the fingers is periangual felon or paronychia when inflammation begins at the edge of the nail plate due to minor skin injuries. During the development process may complete defeat periangual roller and be fiber, which is accompanied by severe pain syndrome and disability of the patient. The main conventional treatment - surgery. In my clinical practice we apply the hirudotherapy (medicinal leech therapy), which effectively eliminates the inflammatory process and allows you to avoid surgery. Here is the most typical clinical example.

Case description: The patient, 40-year-old, of paronychia the first pha-lanx of the 4th finger of the right hand developed as a result of hangnails. At the time of treatment was the third day of the disease: the patient is con-cerned about increasing constant severe burning pain in the damaged finger, last night joined the growing attacks of acute pulsating pain. Objectively: state of moderate severity, the patient is partially able-bodied. Phalans of the 4th finger of the right hand: you can clearly see the tissue with translucent purulent contents, in the form of a strip of outer inner (medial) edge of the nail plate, surrounded by a tense, hot, swollen and congested skin.

Results: At the session of hirudotherapy oversight of two medical leeches on the second phalanx of the finger, one on the outer and inner side. Exposure to the full saturation (24 and 55 min). After self falling away of the leeches, the bites of the superimposed hot wet cotton pads. During the inspection a day after the consoles leeches: the pain is not bothering, it is noted moderately severe arching unpleasant sensations in the region of the inner edge of the nail plate. Plot purulent inflammation eliminated, it remains moderately severe swelling and redness directly around the site of inflammation. During the inspection on the second day after the treatment with leeches - complaints patient does not show any edema and hyperemia of the skin on the former site of inflammation is not observed. Observation on the third day after treatment - inflammation eliminated, the function of the finger is fully restored. Thus, for the elimination of the inflammatory process and full recovery of the patient required one session of treatment with leeches, two leeches and two days of clinical observations.

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Reference

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been reported to have high sensitivity and specificity in its diagnosis. Clinical picture, radiological findings and elevated serum Beta-D-Glucan (Fungitell) supported the diagnosis of Pneumocystis jirovecii. Patient recovered with oral Atovaquone for 21 days and tapering course of oral Prednisone. Repeat imaging showed complete resolution and Serum Beta-D-Glucan level trended down.

**Take-home message:** Interleukin-6 receptor blocker, used in patients with rheumatoid arthritis increase the risk of pneumocystis pneumonia, an opportunistic infection. Serum Beta-D Glucan test can be used as non-invasive testing modality to diagnose pneumocystis pneumonia in non-HIV patients with good sensitivity and specificity. Serial Beta-D Glucan levels may be used to monitor with clinical progress. Molecular methods such as *Pneumocystis jirovecii* PCR (Polymerase chain reaction) may be falsely negative in non-HIV patient.

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Breast cancer detected only by positron emission tomography with extensive osteolytic bone metastases mimicked Multiple Myeloma: A case report

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**Introduction:** Occult primary malignancy usually manifested itself as metastases or secondary-paraneoplastic phenomena. Although occult breast cancer usually presented as axillary lymphadenopathy, it could also have other rare manifestations, such as extensive osteolytic lesions which is the typical manifestation of Multiple Myeloma (MM). The similarity in radiological findings made differential diagnosis extremely difficult, especially when primary breast lesion was undetectable by ordinary diagnostic tools. Here we present a rare occult breast cancer case detected only by positron emission tomography (PET) with extensive osteolytic bone metastases that mimicked MM.

**Case description:** A 48-year-old female patient presented with heart burn, dyspnea and lower back pain. Skeletal survey revealed extensive osteolytic lesions including skull, spine and pelvis (Figure 1A-C), which were highly suspicious for MM. However, there were no Ben-Jones protein in urine and blood sample with mild proliferative bone marrow and normal plasma cell phenotype. Hence, after ruling out MM, PET scan was arranged to screen potential malignancies. It revealed a high uptake lesion in left breast with SUV 2.7 (Figure 1D) and multiple metastases. Although the breast lesion had a high SUV on PET, it was undetectable by mammography and ultrasound.

**Conclusions:** Extensive osteolytic lesions could be the first symptom of occult breast cancer. PET could be a useful tool for occult malignancies to identify primary lesion. Due to the relative low sensitivity of PET in detection of primary breast lesion, clinicians should be aware of occult breast cancer when PET revealed no implications for primary sites. Tissue biopsy of metastatic diseases could be another option to confirm the diagnosis.

**Take-home message:**

1. Extensive osteolytic lesions could be the first symptom of occult breast cancer.
2. PET could be a useful tool to identify primary lesion of occult malignancies.
3. PET has a relative low sensitivity of primary breast lesion, negative result could not rule out occult breast cancer.
4. Tissue biopsy of metastatic diseases could be another option to confirm the diagnosis.

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Figure 1 (A) Pelvis X-ray showed disseminated “punched-out” holes, which was the typical finding of multiple myeloma; (B) skull X-ray presented similar radiological appearance with multiple myeloma; (C) CT scan of spine revealed extensive osteolytic radiological appearance with multiple myeloma; (D)PET scan detected high uptake lesion in left breast, SUVmax 2.7(Arrow)
Post-infarction left ventricular pseudoaneurysm

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Introduction: Pseudoaneurysm of the left ventricle is a severe complication of myocardial infarction that results from a free cardiac wall rupture that is contained by the pericardium, thrombus, or adhesions. Most patients with a cardiac pseudoaneurysm will display symptoms of dyspnea or chest pain, but 10% of patients can be asymptomatic. Trans-thoracic Doppler color flow imaging is a suitable starting diagnostic method for diagnosing a pseudoaneurysm of the left ventricle. Cardiac magnetic resonance is an excellent complementary method for identifying this cardiac entity.

Case description: A patient in heart failure was admitted to receive intensive care therapy. An electrocardiogram showed anterolateral ST elevation and two-dimensional echocardiogram [2DE] posterolateral akinesis of the left ventricle. After a satisfactory in-hospital course he was discharged without any apparent complication. Six months later he was referred for new evaluation due to heart failure symptoms. A 2DE revealed a pseudoaneurysm along the left ventricular lateral wall. A cardiac magnetic resonance confirmed a pseudoaneurysm contained by the pericardium. Late gadolinium-enhanced imaging demonstrated a transmural lateral myocardial infarction with marked delayed enhancement of the pericardium that forms the wall of the pseudoaneurysm.

Results and conclusions: Early surgical intervention is recommended for a pseudoaneurysm of the left ventricle because of its tendency to rupture. Most patients do well after surgical repair, except for that requiring concomitant mitral valve replacement. However, the long-term outcomes of patients with a pseudoaneurysm not treated with surgery appear to be relatively benign, with a very low risk of fatal rupture. Therefore, a conservative approach may be considered in these patients that should include chronic anticoagulation therapy because of a high risk of ischemic stroke.

Take-home message: Transthoracic echocardiography is an acceptable starting diagnostic method in patients having a pseudoaneurysm. Cardiac magnetic resonance has been increasingly used as a non-invasive diagnostic method.

Diffuse colon polyposis unexpected, total regression due to combined treatment on liver metastasis

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The diffuse colonic polyposis regards as a precancerous condition, thus both in tumorous and in premalignant condition the only therapy is the total colectomy. In our case a 62-year-old male begun medical checkup due to weakness, slimming and haematochezia. The blood test revealed that the patients CA 19-9 levels were significantly elevated. The colonoscopy found multiple polyposis in the whole large bowel, furthermore a sigma carcinoma with stenosis. During the surgery multiple and bilobar colorectal liver metastasis were verified, which were proposed with CT scan. Because of the obstruction, we made a palliative sigma resection. Then adjuvant FOLFOX chemotherapy started. After 6 period chemotherapy performed abdominal CT scan showed the progression in the liver process. Therefore second-line Erbitux + FOLFIRI chemotherapy started. After 11 cycles performed restaging CT scan showed significant regression of the liver metastasis. During the control colonoscopy the previously showed multiple polyposis of the large bowel were not detected, the polyps unexpectedly vanished. Because of the significant regression of the liver metastasis suggested the lobectomy, but the oncoteam decided to continue chemotherapy sequence. After 1 year in the course of oncology care performed PET-CT scan showed progression in the liver metastasis particularly in the right lobe. The oncologist started third-line Avastin + POLFOG chemotherapy, but the patient died 3 years after the diagnosis. In our opinion, the regression of the diffuse colonic polyposis of the patient was due to the biological therapy. The submitted case is a literary rarity, because there is no relevant data in the literature that describes the positive effect of the chemotherapy for colon polyps.

One center experience of pneumatosis cystoides intestinalis

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Introduction: Pneumatosis cystoides intestinalis (PCI) is a rare benign condition, in which gas is found in a linear or cystic form in the subserosa or submucosa. The subserous cysts are most frequently found in the small bowel while the submucosal localizations are predominantly seen in the colonic wall. Peritoneal pneumatosis, abdominal gas cysts, cistic lymphophenomatosis, intestinal emphysema or intestinal gas cysts are terms used to describe the occurrence of multiple, gas-filled cysts, of the gastrointestinal tract. Incidence of PCI was reported to be 0.03% in the general population. It is a radiographic finding and not a diagnosis, as the etiology varies from benign conditions to fulminant gastrointestinal disease.

Case description: A 77-year-old patient was admitted in Pauls Stradins Clinical University Hospital with complaints of abdominal discomfort and bloating during two years. Blood laboratory tests revealed no changes in the blood count, CRP (C reactive protein) was 77.6mg/l (N < 5mg/l). A colonoscopy showed c.sigmoideum, c.descendens submucosal lesion in 10-15cm zone with submucous cystic formations, visually reminiscent of “a bunch of grapes, which are connected to each other”, filled with a whitish, in some areas bluish content, with unchanged superficial mucosa.

Results: Since 2011, lesion was increased in size of 5cm. Endoscopic ultrasound showed formation of submucosal anehogenic mass; 11-17mm thick, blurring, palpable densely, minimally vascularized with no signs of malignancy. A computer tomography (CT) scan of the abdomen and pelvic area, and retroperitoneal space revealed infiltrative mass in the wall of the c.sigmoideum. Colonoscopy was performed for tumor location, followed by laparoscopic resection of the tumor mass. Morphological examination of full specimen revealed pneumatosis cystoides intestinalis in size of 11.5x5.6x4cm, with multicore foreign body gigantic cells on the inner surface of the cysts, and no signs of malignancy.

Take-home message: Our case, pneumatosis cystoides intestinalis is a rare disease, which is difficult to diagnose by radiology or endoscopy, even for exclusion of malignancy. PCI is an indication for surgery if the lesion is growing in size and may cause the symptoms of colon obstruction.

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**A case of recurrent and progressive respiratory failure**

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**Introduction:** Patients presenting with dyspnea are common. Often times, patients carry previously anchored diagnoses, such as COPD, as a cause of their pulmonary symptoms. It is important, however, to perform a thorough history and physical examination in order to consider less common causes of dyspnea, such as in the case of this patient who was diagnosed with amyotrophic lateral sclerosis (ALS). The typical course for this disease process includes progressive limb and bulbar muscular weakness with eventual involvement of the respiratory musculature, ultimately leading to respiratory failure - the most frequent cause of death in ALS within 2 to 5 years of diagnosis.

**Case description:** A 68-year-old woman presented to the hospital with recurrent episodes of dyspnea and carbon dioxide retention. She has a history of type II diabetes, hyperlipidemia, hypertension, cervical stenosis, and chronic obstructive pulmonary disease (COPD) requiring home oxygen therapy. Her medications included the following COPD regimen: short acting anticholinergic/beta agonist inhaler, mucolytic, steroid, long acting beta agonist nebulizers, and a Trilogy adaptive servo-ventilation device for nighttime breathing assistance. In the ED, workup showed pH 7.34, pCO2 95mmHg, and HCO3 of 50mmHg; chest x-ray was significant for mild hyperexpansion. On examination, she had mild proximal upper extremity weakness, bilateral thenar atrophy, and a nasal voice. She was in the ICU for 24-48 hours for intensive positive pressure therapy because of her severe carbon dioxide retention.

**Results and conclusions:** Bedside pulmonary function testing was consistent with a restrictive process, and she was diagnosed with obesity hypoventilation. However, her BMI was only 39, and given her history of weakness, and thenar atrophy, we were concerned for a neurologic process. Neurology found fibrillations with insertion and prominent fasciculations within the proximal right upper limb muscles on needle electromyography. Ultrasound examination with phrenic nerve stimulation showed reduced recruitment of large, complex motor unit potentials in both hemidiaphragms and intercostal muscles. With this constellation of symptoms, ALS was diagnosed. Other possible diagnoses were ruled out with neuroimaging, serologic, and cerebrospinal fluid studies.

**Take-home message:** Progressive dyspnea as the major presenting symptom of ALS is exceedingly rare, occurring in less than 1% according to literature. It is important to keep ALS in the differential diagnosis in patients who present with progressive dyspnea and restrictive lung disease on pulmonary function testing because this diagnosis has significant prognostic difference compared to other entities such as obesity hypoventilation syndrome.

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**Macrophage activation syndrome in a Case of dermatomyositis overlapping syndrome with systemic lupus erythematosus: A case report**

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**Introduction:** Macrophage activation syndrome (MAS) is a rare but aggressive life-threatening auto-immune disease. It is characterized by fever, rash, splenomegaly, blood cytopenia, hypertriglyceridemia, high ferritin levels, liver insufficiency, coagulopathy and neurologic involvement. Persistent activation of inflammatory cells like macrophages, natural killer cells and cytotoxic lymphocytes can lead to a cytokine storm and multi organ damage. MAS is usually triggered by rheumatologic diseases and rarely in the presentation of a new connective disease like systemic lupus erythematosus (SLE). In addition to MAS, the auto-immune conditions of SLE can be associated with different overlapping syndromes notably dermatomyositis.

**Case description:** We present a 31-year-old male from a Latin-American background without pre-existent conditions who presented complain of sore throat, joint pain, fever and fatigue. He quickly developed a pancytopenia with increased liver and pancreatic enzymes. In the process of the investigation, he was treated with antibiotics and admitted intubated to the intensive care unit for a severe pneumonia.

**Result and conclusion:** We proceeded with a bone marrow biopsy which detected an active MAS. Regarding his muscle weakness, we also revealed an inflammatory myositis on a quadriceps muscle biopsy. Further discovery of positive auto-antibodies (ANA and anti-DNA) showed the presence of a LED. We successfully treated his different auto-immune complications with high doses of prednisone, and intravenously immunoglobulins. After 2 months of his admission and 12 days passed in the intensive care unit, the patient returned home with minimal sequelae with a long term immunosuppressive treatment of prednisone, mycophenolate mofetil and hydroxychloroquine.

**Take-home message:** The early identification of the cause of MAS is crucial for the accurate management of this disease and preventing further multi organ complications. SLE has remains a complex condition that can present its first manifestations in a broad spectrum of auto-immune diseases.

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**Gastrointestinal metastases from breast cancer: A case report**

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**Background:** Breast cancer is the most common type of cancer in women nowadays. According to published major studies, the most common sites of metastases of breast cancer are bone, lung, liver and brain. However, it can also metastasize rarely to the gastrointestinal tract. Among the different subtypes of breast cancer, gastrointestinal spread has been associated to infiltrating lobular carcinoma. We present a case of perforated acute diverticulitis that underwent surgery, in which the pathological exam informed of colonic metastasis of lobular breast carcinoma.

**Case report:** A 78-year-old woman, with medical history of high blood pressure, diabetes and left mastectomy performed 14 years ago for infiltrating lobular carcinoma (Stage T2N2M0), with positive estrogenic receptors. Oncological controls showed pleural and bone progression in the last year, so hormonal therapy was indicated. She was admitted to the emergency department due to 72 hours of left lower-quadrant abdominal pain associated with constipation and nausea. On examination she presented tenderness and a palpable mass in the left lower quadrant. Blood tests showed an increased leucocyte count of 13.5x103/μL with neutrophilia, a CRP of 356mg/L and high lactate levels (4.5mmol/L). An abdominal computed tomography (CT) scan showed a left inguinal abscess (6x8x7cm) communicating with an inflammatory mass involving the sigmoid colon, as well as extensive bone metastases, not visualized in previous CTs. An emergency Hartmann’s procedure was performed. The post-operative period was uneventful. The pathological report of the surgical specimen informed of infiltration in multiple diverticula by a carcinoma, with morphological pattern and immunohistochemistry compatible with a lobular breast carcinoma. The patient was derived to the Department of Oncology to continue follow-up and hormonal therapy.
Conclusions: Gastrointestinal breast metastases are uncommon, however, we should consider this diagnosis in patients with tumoral progression presenting with abdominal symptoms. Metastatic patients should receive medical treatment, reserving surgery for complications like obstruction or perforation, as in the case presented.

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Physical plasma in palliative cancer care: Introduction and perspectives

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Background: Patients suffering from advanced head and neck tumors frequently suffer from superinfected chronic wounds caused by necrotic tissue due to progressive tumor growth, weak systemic and local immunological response and various accompanying illnesses. Due to strong wound vulnerability, local antiseptic wound care of microbial contaminated tumor areas is frequently complicated by bleeding, pain and patient dissatisfaction. As Cold Atmospheric Plasma (CAP) has been proven to be anti-microbial and anti-cancerous, CAP could occupy an important role in palliative cancer care.

Material and methods: After a curably intended surgical cancer treatment of a well-differentiated squamous cell carcinoma of the left cheek at the beginning of 2015, the 51-year-old patient noticed a rapidly progressing obstructing lesion of the distal cheek. CT scan revealed an increased tumor size with ulceration of the skin and the underlying carotid artery. Since this was not operable due to inoperability, the patient was referred to our department for palliative care. CAP treatment was started on 27.11.2015 with the kINPenMED (Neoplas GmbH, Greifswald, Germany) for near 5 minutes in a meandering manner.

Results and conclusions: After CAP therapy a partial tumor mass reduction was observed. The ulcerated tumor growth region received treatment with the kINPenMED for 2 weeks. Wound care was implemented in conjunction with an antiseptic wound dressing. Pain and wound vulnerability were reduced significantly. Upon CAP therapy a partial tumor response with tumor mass reduction were observed. The ulcerated tumor area has been reduced to one-quarter of its original size. The underlying carotid artery remained intact. Histological examination revealed a reduction of tumor necrosis and the wound showed significant improvement.

Conclusion: By a sufficient reduction of bacterial colonization, decrease of inflammation, wound vulnerability and algesia, CAP constitutes an innovative and valuable treatment option in palliative cancer care. Local tumor mass reduction is an unexpected and promising response during CAP treatment and has to be further examined.

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Introduction: Proximal hamstring tendon tears are uncommon injuries. Currently there is no consensus on what constitutes optimum management but the literature demonstrates a recent trend towards surgical management. Several authors have demonstrated less long-term disability and better return to sporting activity with surgical treatment when compared to non-operative treatment. However, these reports have focused on complete tears and there is a dearth of evidence to guide management of partial tears particularly in the high performance athlete.

Complete tear of the obturator internus tendon has rarely been described in the literature and has not been reported in combination with proximal hamstring tendon pathology.

Case description: A 58-year-old female elite age-group triathlete presented with an acute on chronic exacerbation of increasing right buttock pain that had reduced her mobility such that she was unable to continue sports participation or walk unaided. Examination revealed ischial tuberosity tenderness, reduced hamstring strength and pain on hip extension. Magnetic resonance imaging revealed a 25% partial thickness tear of the conjoined hamstring tendon and complete tear of the obturator internus. In the absence of a history of trauma and no underlying osseous abnormality, the aetiology of the injury was presumed to be related to overuse and her high training load.

Results and conclusions: Surgical management was considered due to the considerable disability and duration of symptoms. However, repair of the partial tear would require conversion to a full tear to repair the deep fibres and surgical management of obturator internus rupture has not previously been described.

Ultrasond guided steroid injection to the ischial tuberosity and physiotherapy was performed as lower risk initial options. The patient experienced immediate relief of symptoms, and this improvement is maintained at latest follow-up (12 months). There was no significant difference between the pre-injury and latest SF36 and proximal hamstring questionnaire scores and she has returned to the pre-injury level of sport when treated non-operatively.

Conclusions: By a sufficient reduction of bacterial colonization, decrease of inflammation, wound vulnerability and algesia, CAP constitutes an innovative and valuable treatment option in palliative cancer care. Local tumor mass reduction is an unexpected and promising response during CAP treatment and has to be further examined.

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The case report also has broader applicability to isolated partial hamstring tendon ruptures, which occur more frequently, but have a limited evidence base to guide management. This report highlights that despite an increasing trend towards surgical management of hamstring tendon tears, patients with partial tears treated with injection and physiotherapy have the potential to return to athletic performance.

Return to Pre-Injury Level of Sport in an Elite Age-Group Triathlete after Non-Operative Treatment of Combined Complete Obturator Internus and Partial Hamstring Tendon Tears

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