Method: Fourteen patients with CCS, which level of injury was between C4 to C6, were performed rTMS with high frequency (20Hz) over the unilateral motor cortex for 5 days as well as the conventional occupational therapy. The non-treated side of each subject was used as control. We assessed the neurological status using International Standard for Neurological Classification of Spinal Cord Injury (ISNCSCI), and functional status of upper extremities using the Jebsen hand function and O’conner logical Classification. We assessed the neurological status using International Standard for Neurological Classification of Spinal Cord Injury (ISNCSCI), and functional status of upper extremities using the Jebsen hand function and O’conner logical Classification and, apparent diffusion coefficient (ADC) at each level, and calculate imaginary spinal cord tracts of each subject.

Results: The neurological status of the upper extremity motor score in the treated side using ISNCSCI was improved in all subjects otherwise only 10 of 14 subjects (71.4%) showed some improvements of non-treated side at 1 month after treatment. The functional status including the writing score of Jebsen hand function test were also significantly improved more in treated side in comparison with non-treated side at 1 month. The FA values and the number of imaginary spinal cord tracts of treated side at the injured level were also increased more than those of non-treated side in the same subjects. Any side effects such as seizure, severe headache, nausea or vision problem was not observed during rTMS treatment and follow-up period.

Conclusions: The high frequency rTMS was effective to improve the neurological and functional status of CCS patients and might increase the spinal cord plasticity without any serious side effects.

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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 1g/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 2.1cm 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.\(^\text{1}\) The link with pericardial effusions has been proven with robust statistical analysis.\(^\text{2}\) No specific mechanism has been proposed but an immune mediated reaction or off target inhibition of growth factors may be involved.\(^\text{3}\) Management includes dose interruption or reduction, and/or treatment with steroids.\(^\text{3}\) 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.