



Contents lists available at ScienceDirect

New Horizons in Clinical Case Reports

journal homepage: www.elsevier.com/locate/nhccr

Abstracts: European Congress of Surgical Case Reports (EUSCR-2017), 14–15 July 2017, Vienna, Austria

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Oral Presentations

Successful use of deep hypothermic circulatory arrest (DHCA) during mid-term pregnancy

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Introduction: Ascending aortic dissection (Type A) often requires deep hypothermic circulatory arrest (DHCA) for proper repair. It involves the use of cardiopulmonary bypass to achieve whole body cooling to a temperature of 18 degrees Celsius prior to the cessation of all circulation. This circulatory arrest then allows for repair of the aortic arch and/or cerebral vessels without cross-clamp. This technique is well described and has become standard practice in the treatment of Type A dissection. The use of DHCA during pregnancy, however, has seldom been described.

Case description: A 31-year-old female at 21 weeks gestation presented acutely to the emergency department with a Type A aortic dissection. She was taken emergently to the operating room and cardiopulmonary bypass was initiated via femoral arterial and central venous cannulation. Aortic repair was accomplished during a 25 minute period of DHCA. Destruction of her aortic root by the dissection included the right coronary ostium and required composite tissue valve and conduit replacement (Bio-Bentall) with right coronary saphenous vein bypass. Fetal ultrasound imaging obtained preoperatively and postoperatively demonstrated no changes in fetal heart tones or obvious evidence of fetal injury. She was subsequently discharged on postoperative day 4. Evaluation by obstetrics 8 weeks postoperatively (29 weeks gestation) revealed normal fetal growth. 4 months post operatively she delivered a full-term infant without any noticeable deficits.

Conclusions: The use of DHCA for type A aortic dissection is standard practice but its use during pregnancy has rarely been described. This case

illustrates the use of DHCA during midterm pregnancy that resulted in an excellent outcome.

Take home message: DHCA can successfully be used during midterm pregnancy.

<http://dx.doi.org/10.1016/j.nhccr.2017.10.002>

Survival of the Unfittest: A case of End-Stage Heart Failure and advanced esophageal cancer managed successfully with an implantable Left Ventricular Assist Device (LVAD) and aggressive chemoradiation therapy

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Introduction: End-stage heart failure and advanced esophageal cancer carry an extremely poor prognosis with a disabling quality of life (QOL). Individually, the 3-year survival is poor; simultaneously, it is unreported, but predictably dismal. LVAD implantation as Destination Therapy (DT) for non-transplant candidates has proven to prolong survival with an improved QOL. However, some DT-LVAD patients have survived their cardiovascular condition only to discover that they have serious malignancies. Treatment of these cancers in an LVAD patient is challenging. Anecdotal reports are beginning to appear in the literature as the DT-LVAD patient population continues to grow.

Case description: A 72 year-old man with end-stage heart failure was implanted with a Heartmate II® LVAD as Destination Therapy. The surgery was uneventful and he was discharged on postoperative day 16. Seven months later, he developed melena and was found to have an ulcerated mass at the gastroesophageal (GE) junction that was pathologically adenocarcinoma. CT/PET scanning and upper endoscopic sonography staged the disease at III (T3N1M0). Subsequent imaging showed a lytic L4 lesion that was biopsy proven metastatic disease. Due to the presence of the LVAD, the patient was not a surgical candidate for resection. Treatment

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¹ Please note that the selected abstracts were chosen by the editor and this publication does not include all abstracts presented at the congress.

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