44431 - ANAESTHETIC MANAGEMENT FOR THE PATIENT OF LARGE OSTIUM SECUNDUM AND SEVERE MITRAL REGURGITATION WITH ADDISON'S DISEASE UNDERGOING MINIMALLY INVASIVE CARDIAC SURGERY

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PURPOSE: To highlight the anaesthetic challenges due to the minimally invasive cardiac surgery (MICS) associated with combined atrial septal defect (ASD) repair and Mitral valve replacement (MVR).

CLINICAL FEATURES:

A 54 year old female, 80 Kg admitted with the diagnosis of right heart failure due to ASD and severe mitral regurgitation. She had history of chronic steroid therapy for ulcerative colitis and Addison's disease. She underwent MVR and closure of ASD through right anterior thoracotomy approach i.e. MICS. Written informed consent was obtained from the patient.

DISCUSSION:

The advantages of MICS include less tissue trauma, faster recovery, and shorter hospital stay. Associated anesthetic challenges include problems of one lung ventilation; transesophageal echocardiography (TEE) guided placement of arterial and venous cannulae, intraoperative haemodynamic disturbances, prolonged bypass time, and management of postoperative pain. 1 Our patient had anticipated difficult airway precluding use of double lumen tube, therefore required early initiation of CPB for deflation of right lung. Regional anesthesia could not be performed due to obesity, abnormal position of spine and haemodynamic instability. Therefore, we preferred patient controlled analgesia for our patient. Due to the possibility of malposition of venous cannula to left atrium through the septal defect, cannula was inserted through femoral vein into the right atrium using TEE and then guided the catheter into superior vena cava using finger palpation. TEE was used to further confirm the position. We also monitored cerebral and peripheral oxygenation (Fig 1) using near infrared spectroscopy (NIRS) throughout the operation. We tried to maintain value more than 75% of the baseline value to prevent potential complication of cerebral and peripheral hypoperfusion. 2 We were successful to do that in cerebral oxygenation but peripheral oxygenation value remained low during and after CPB which is consistent with previous studies. 3

CONCLUSION:

Careful selection of the patient is key for the successful MICS. Despite presence of difficult airway and right ventricular failure, our patient underwent MICS due to increased chance of sternal dehiscence with conventional surgery as she had gross osteoporosis because of chronic steroid therapy. Anesthesia technique tailored to the patient's need is essential for the good outcome.

REFERENCES:

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Figure1 – A= Onset of CPB, B= Off CPB