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Abstracttitel: Awake Transapical aortic valve implantation using thoracic epidural anesthesia

Purpose: Transapical aortic valve implantation(TA AVI) is a new technique for beating heart off-pump therapy in high risk patients with symptomatic aortic stenosis.(1).Our standard protocol in high risk TA AVI patients is general anesthesia with early extubation,using fast track anesthesia.Here-in we report a patient who underwent TA AVI awake,using thoracic epidural anesthesia.

Methods: A 85 year old patient keeping in view of his associated comorbidities(poor lung function test,aplastic anemia,GI bleed,renal insufficiency,poor ejection fraction) was decided to implant the beating heart Aortic valve under thoracic epidural anesthesia.The epidural catheter was placed in T2-T3 region using the LOR and hanging drop technique.ropivacaine 0.2% was administered as test dose and followed with continuous infusion of ropivacaine and fentanyl.Motor blocked achieved until T 10 and sensory blockade until T12.After the pleura was opened , saturation was maintained using CPAP mask with a pressure of 10mbar.Patient did not experience any pain and discomfort during the procedure. Communication was maintained throughout the surgery using head movements from the patient.Post operative analgesia was delivered for 4 days through the catheter and it was removed after the coagulation profile was normalised.

Result :

The patient had a score of 1 using the visual analogue scale post operatively. He did not experience any untoward side effects of ropivacaine. As the patient was awake throughout the procedure and received CPAP ventilation he did not require any intubation.As the results were satisfying and pain scores were minimal,he could be discharged on the 10th post-operative day.

Conclusion: Our case study shows that awake TA AVI is feasible in these high-risk patients ,particularly those with underlying pulmonary disease. We have performed 3 "awake" TA AVIs in our institute up to now.Further evaluation in larger number of patients will be required.

Reference: 1. Walther T,Falk V, Borger MA,Dewey T,Wimmer-Grienecker G,Schuler G,Mack M,Mohr FW: Minimally invasive transapical beating heart aortic valve implantation: Proof of Concept: European Jour. Cardiothoracic Surg: 2007 -31 (9-15)