ANESTHETIC APPROACH OF A MORBIDLY OBESE PATIENT UNDERGOING SINGLE-STAGE BILATERAL THORACIC SURGERY.

Athina Siampalioti¹, Maria Spyraiki¹, Eleni Sintou¹, Georgios Karpetas¹, Aurora Dinca¹

¹Anesthesiologist, Critical Care and Anesthesia Department, University Hospital of Patras, Patras, Greece

Background and aims

The anesthetic management of morbidly obese patients constitutes a challenge for the anesthesiologist, as these patients demonstrate significantly high morbidity and mortality rates. We present a case of a morbidly obese patient undergoing bilateral thoracotomy under combined general and epidural anesthesia.

Methods

A 44 year old male with BMI=49kg/m² and a medical history of arterial hypertension, diabetes mellitus, dyslipidemia and nephrectomy due to kidney cancer, underwent a bilateral thoracic surgery. Preoperative spirometry revealed: FEV₁= 3,9lt (96%) and FVC= 4,32lt (88%) while arterial blood gases (ABG's) in room air revealed: pH= 7,35, pCO₂= 36,7mmHg, pO₂= 72,5mmHg. Echocardiography revealed a subaortic stenosis and EF=60%. We administrated general anesthesia with a double lumen endotracheal tube 39Fr, along with thoracic epidural analgesia (levobupivacaine 2% and fentanyl 2µg/ml with a rate of 5ml/h and a patient- controlled bolus lockout of 5ml every 15 min at T5-6 interspace. Basic monitoring, invasive arterial pressure measurement, Bispectral Index and Cerebral Oximetry monitoring (INVOS) were used.

Results

The patient was hemodynamically stable perioperatively, while no difficulty was observed during one- lung ventilation, for both lungs. Cerebral oximetry and BIS remained within normal limits (INVOS variation<10%, BIS= 40-55). Postoperative ABG's indicated (FiO₂= 35%), pH=7,4 ,pO₂=125mmHg, pCO₂=38,2mmHg and VAS scores <5 under epidural analgesia.

Conclusions

Thoracic epidural analgesia has been proven to be beneficial and safe for the morbidly obese patients, providing not only quality and faster recovery (Aldrete score >9 within 45 min), but also a reduction in ICU stay after high risk surgeries.

References

1. *Improvement of recovery parameters using patient-controlled epidural analgesia for video-assisted thoracoscopic surgery lobectomy in enhanced recovery after surgery: A prospective, randomized single center study.* Zejun N, Wei F, Lin L, He D, Haichen C. *Thorac Cancer.* 2018 Jul 27. doi: 10.1111/1759-7714.12820.
2. *Managing post-thoracotomy pain: Epidural or systemic analgesia and extended care - A randomized study with an "as usual" control group.* Tiippana E, Nelskylä K, Nilsson E1, Sihvo E, Kataja M, Kalso E. *Scand J Pain.* 2014 Oct 1;5(4):240-247.
3. *Anesthesia for thoracic surgery in morbidly obese patients.* Lohser J, Kulkarni V, Brodsky JB. *Curr Opin Anaesthesiol.* 2007 Feb;20(1):10-4.