Regional versus General Anesthesia for Abdominal Aortic Aneurysm Surgery

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The patient with aortic aneurysm carries multiple problems with moderately to highly moribund conditions. Aneurysms in the thoracic region or above the renal arteries should be managed with great attention for extracorporeal management and renal protection. These operations could not be performed except in highly specialized centers. Aortic aneurysm below the renal vessels is within the capacity of most of the general hospitals and well-experienced anesthesiologists. This topic will compare Regional Versus General Anesthesia for Abdominal Aortic Aneurysm Surgery below the renal vessels.

These classes of patients are usually victims of hypertension, ischemic heart disease, diabetes mellitus, hyperlipidemia, poly-pharmacy and rupture of the aneurysm at any time.

Once operative intervention is decided the question of what is the anesthetic technique of choice would be definitely raised.

For lengthy operation, with good management of cardio-respiratory functions, proper renal and brain protection, anti coagulant therapy, post clamping hypertension and post declamping acid base disturbances, general anesthesia would be the anesthetic technique of choice.

On top of the above mentioned problems some patients would suffer from COPD, upper airway difficulty, borderline hepatic dysfunction (hepatitis), regional analgesia would be the anesthetic technique of choice.

After preload with 1000 ml of crystalloids, low spinal (L4 – L5) with 25μg fentanyl and high epidural analgesia (T12-L1) 10 ml bupivacaine 0.5% with 50μg are to be used. Spinal analgesia would provide good relaxation of abdominal muscles while epidural block would ensure high level of anesthesia. Good sedation with midazolam is to be done.

Less post clamping hypertension, acid base disturbance, and analgesia could be extended for the postoperative period. It is well known that regional analgesia is more suppressing for the stress response. Spinal shock could be avoided by preload of crystalloids 24 hours preoperatively and the onset of regional analgesia to be started 5-6 hours after the last dose of heparin.

On conclusion, combined spinal epidural analgesia could be used in selected cases of abdominal aortic aneurysm below the renal arteries. This technique could be used preoperatively for such cases.