TITLE : THORACIC EPIDURAL ANESTHESIA IS NOT PREFERABLE TO GENERAL ANESTHESIA IN HIGH RISK SURGICAL PATIENTS

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Recent interest has been focused on the possible beneficial effects of thoracic epidural anesthesia to reduce postoperative morbidity. However, several criticisms have been made especially about the limited sample size of these studies. Morover, studies do not concern the issue of intraoperative anesthesia, since differences in postoperative treatment could account for their findings.

The goal of our prospective randomized controlled study performed in high risk surgical patients was to determine whether intraoperative thoracic epidural anesthesia associated with light general anesthesia alter postoperative morbidity when compared to a standard technique of "balanced" general anesthesia. A total of 173 patients scheduled for abdominal aortic surgery were admitted to the study; 86 received fentanyl flunitrazepam pancuronium anesthesia (group 1) and 87 received thoracic epidural anesthesia associated with light general anesthesia (group 2). Preoperative evaluation was performed using standard clinical tools, dipyridamole thallium gamma-tomography and radionuclide angiography. During the postoperative period, analgesia was performed using either parenteral morphine (group 1 = 35, group 2 = 32) epidural fentanyl (group 1 = 30, group 2 = 25) or epidural bupivacaine (group 1 = 21, group 2 = 30). The 2 groups are similar with regards to preoperative clinical findings, thallium redistribution and left ventricular ejection fraction. Cardiovascular and respiratory morbidity (Table 1) did not differ between the 2 groups.

	Group 1	Group 2
Myocardial infarction	5	5 (ns)
Congestive heart failure	7	5 (ns)
Prolonged myocardial ischemia	16	19 (ns)
Atelectasis minor	35	39 (ns)
Atelectasis major	2	5 (ns)
Pneumonia suspected	15	11 (ns)
Pneumonia confirmed	16	8 (ns)
Acute respiratory failure	8	4 (ns)
Mortality	4	3 (ns)

We conclude that thoracic epidural anesthesia associated with light general anesthesia is not preferable to general anesthesia in high risk surgical patients. This study does not exclude the possibility that postoperative analgesia could influence postoperative outcome.

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TITLE : CHANGES IN BODY OXYGEN CONSUMPTION DURING RECOVERY FROM SPINAL AND EPIDURAL ANESTHESIA

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Spinal or epidural anesthesia induces hypothermia by peripheral vasodilation. Few data are reported concerning rewarming during regional anesthesia and the corresponding changes in body oxygen consumption (VO_2). We designed this study to assess this point.

Ten ASA I-II patients (8 M and 2 W, mean age 60 ± 19) were included in the study after informed consent and ethical committee approval. Spinal anesthesia was performed with 4 ml of 0.5 % bupivacaine in five patients. Lumbar epidural anesthesia was performed with 20 ml of 0.5 % bupivacaine in five other patients.

Patients were studied in the recovery room until complete recovery from spinal or epidural anesthesia or rewarming. Tympanic temperature was measured with thermistors (tympanic membrane sensor ELLAB^R 221.30 A). Skin temperatures was measured at hand, T4, T10 and foot levels (MALINCKROTT^R thermocouple probes). Shivering was recorded with an electromyograph (DISA 05A02) from deltoid and quadriceps muscles. $V0_2$, Carbon dioxide production (VCO_2) and respiratory quotient (RQ) were measured using a head canopy system (Deltatrac metabolic monitor DATEX^R). Measurements were performed every minute and averaged every 15 min.

Statistical analysis used ANOVA for repeated measurements and t test. Values are expressed as mean ± SD.

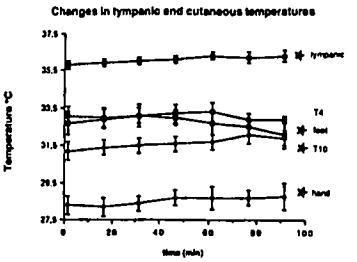
On arrival in the recovery room, tympanic temperature was 35.5 ± .7 °C and sensory blockade extended to 13.3 ± 3.2 segments.

Regression of sensory blockade was associated with a significant increase in hand and T10 temperatures and a decrease in foot temperature (figure 1).

Mean value of $V0_2$ and $VC0_2$ did not change during the study (figure 2) but shivering produced instantaneous transient increases. $V0_2$ and $VC0_2$ were unrelated to the extension of sensory blockade (figure 2).

No difference was documented between patients having received spinal or epidural anesthesia.

During recovery from spinal or lumbar epidural anesthesia, shivering and the related changes in VO2 are independent of SB extension.



*p < 0.05 significant from baseline