

## 9. EFFECT OF EPIDURAL ANESTHESIA AND ANALGESIA ON POSTOPERATIVE FUNCTIONAL EXERCISE CAPACITY AND QUALITY OF LIFE. A RANDOMIZED CLINICAL TRIAL

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**Introduction:** Although epidural anesthesia and analgesia provides superior pain relief compared with systemic opioids, there is some uncertainty as to whether epidural influences postoperative outcome. The purpose of the present study was to assess the effect of epidural analgesia on postoperative functional exercise capacity and health-related quality of life under standardized conditions of clinical care.

**Methods:** The study was approved by the ethics committee of the institution. Sixty-four patients, ASA 1 and 2, scheduled for elective colorectal surgery, were assigned at random to two groups of thirty-two patients each. The control group received general anesthesia (GA) followed by PCA morphine, while the treatment group received intraoperative GA and epidural blockade with bupivacaine followed by continuous epidural analgesia with bupivacaine and morphine. Post-operative analgesia was provided to both groups for 4 days. All patients in both groups were offered similar diet and assisted mobilization. Visual analogue scale (VAS) at rest, on coughing and on ambulation, and bowel function were recorded before surgery and daily after surgery until discharge. Readiness for discharge (RFD) and length of hospital stay (LOS) were also recorded. Six-minute walking test (validated index of functional exercise capacity)[1] and SF36 (physical and mental health) survey[2] were recorded before surgery and three and six weeks after surgery.

**Results:** The two groups were comparable for demographic data, diagnosis, surgical time, nutritional support and incidence of complications. VAS at rest, on coughing and on ambulation was significantly lower in the treatment group compared with the control group ( $P < 0.01$ ). Passage of gas and bowel movements were achieved earlier in the epidural group ( $p < 0.01$ ). Patients were ready to be discharged earlier in the epidural group ( $p < 0.01$ ), but LOS was similar in both groups. Although there was a decrease in the postoperative six-minute walking test in both groups, the reduction during the post operative period was significantly less in the epidural group ( $p = 0.0005$ ). Similarly, there was a significant impact of epidural analgesia on physical health over time, meaning that the treatment group had a better physical health score ( $P < 0.01$ ).

**Conclusion:** Under standardized conditions of surgical and postoperative care, epidural anesthesia and analgesia is associated with better functional exercise capacity and improved physical health.

1. Guyatt GH et al, *Can Med Assoc J* 1985; 132: 919-923

2. Mayo NE et al, *Stroke* 2000; 31: 1016-1023