

Effect of transversus abdominis  
plane block combined with general  
anesthesia on perioperative stress  
response in patients undergoing  
radical gastrectomy

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# Clinical research protocol

**TITLE:** Effect of transversus abdominis plane block combined with general anesthesia on perioperative stress response in patients undergoing radical gastrectomy.

**BACKGROUND:** Postoperative pain, especially the incision pain, play an essential role on body stress. T6-L1 Nerve, walking in the abdominal transverse plane (TAP), were block by TAP block with long-acting local anesthetic, which could effectively suppress abdominal pain, strengthen the analgesic effect, reduce the amount of drugs, reduce the body stress response, accelerate postoperative rehabilitation. Rafi in 2001 proposed blind TAP block through the Petit triangle, which has been confirmed by McDonnell et al. Subsequently, Tran performed TAP block by the side of the axillary line, but it can only affect the T10-L1 nerve. Recently, ultrasound-guided lateral TAP block is used in the postoperative analgesia of lower abdominal surgery and has achieved satisfactory results.

**SIGNIFICANCE:** Plane transverse obstruction is a new

analgesic technique. Traditional epidural block analgesia is often considered as a "gold standard" for analgesia and stress reduction. In this study, we observed the analgesic effect of TAP block, and compare the effect on the neuroendocrine-endocrine of the body with epidural anesthesia.

### **Research content:**

1. Preoperative examination, recruiting test subjects;
2. Eligible subjects were randomly assigned to different groups;
3. Different groups: general anesthesia as control group; general anesthesia with epidural block group; general anesthesia with TAP block group;
4. Indicators: heart rate (HR) and mean arterial pressure (MAP) in different time points: preoperative, anesthesia induction before intubation, tracheal intubation, surgical incision, surgery after extubation, 6,24,48 hours after the surgery. Neurological-endocrine test (cortisol, blood glucose, Cytokines) in different time points: 0,6,24,48 hours after surgery. Opioid use, pain scores, adverse reactions and complications.

### **participants recruited**

1. Admission criteria: elective surgery for open gastric cancer radical surgery patients, 20-75 years old, ASA I ~ III level, no local anesthesia history, no vital organ dysfunction.
2. Exclusion criteria: emergency patients, preoperative infection, immune and endocrine system diseases, radiotherapy and chemotherapy history, preoperative blood transfusion patients.
3. Termination criteria: TAP block failure or with severe complications, epidural block failure or with severe complications, patients who undergo perioperative excessive bleeding need blood transfusion, and patients who voluntary withdraw from the study.