**ANALGESIA/NOCICEPTION INDEX-GUIDED REMIFENTANIL ADMINIST- RATION DURING GENERAL ANESTHESIA FOR SPINAL SURGERY**

Duan Yi, MS, Bin Wei, MD, LiPing Zhang, MD, Peking University Third Hospital, Beijing, China

**Background:** Analgesia/Nociception Index (ANI) monitor is a novel non-invasive device derived from continuous analysis of heart rate variability .It can evaluate parasympathetic tone and reflect nociception during general anesthesia. This study was to evaluate the clinical profile of ANI-guided combined remifentanil-propofol target-controlled infusion(TCI) during general anesthesia.

**Methods:** 60 adult patients underwent posterior decompression and internal fixation for lumbar surgery were randomized into two groups, ANI-guided analgesia group (ANI group) and control group which was blinded to ANI. In both groups, the propofol target concentration was adjusted to maintain BIS in the [40-60] range. In ANI group, the predicted effect-site concentration of remifentanil was adjusted to keep ANI values between 50 and 70, while in the control group, the dose of remifentanil was adapted corresponding to HR and SBP. Incidence of unwanted events (haemodynamic instabilities) and interventions, Anesthetics consumption, recovery time, and other symptoms(such as PONV) were recorded.

**Results:** The total number of unwanted events was significantly lower in the ANI group (32) than in the control group (61; P＜0.01). Reminfentanil mean consumption was lower in the ANI group than in the control group (0.089±0.025ug/kg-1.min-1 vs. 0.107±0.029ug/kg-1.min-1;P＜0.05).We did not find any significant statistic differences in the time of recovery, as well as other symptoms between two groups.

**Conclusions:** ANI-guided anesthesia resulted in more stable haemodynamics and lower remifentanil administered dose.