**Wake Up and Endoscope Insertion Depths as Measured by SEDLine Monitor in Advanced Gastrointestinal Endoscopy**

Basavana Goudra, Preet Singh, Joel Reihmer, Amit Manjunath

**Introduction:** Patients undergoing gastrointestinal (GI) endoscopic procedures are typically consented for MAC (monitored anesthetic care). The patients are given to believe that they will be getting sedation and not general anesthesia (GA).

**Methods:** Fifty patients undergoing advanced upper GI endoscopic procedures were studied. Bolus and infusion rates of propofol were titrated to desired clinical endpoints (lack of response to scope insertion/manipulation, loss of eyelash reflex and preservation of spontaneous ventilation). Routine monitoring as recommended by ASA was applied in all patients. Patient state index (PSI), as measured by SEDLine was observed during the entire procedure by a dedicated research assistant. Anesthesia providers were blinded to this data and as a result sedation levels were not titrated based on PSI.

**Results:** PSI data was analyzed to obtain the percentage of time spent by each patient at various sedation spectrum(0-25, 25-50, 50-75, 75-100). Of the total duration of sedation, 25.81 ± 24.88 % (1/4th) of the time, patients were under-sedated (PSI of 50-75) as recorded by SEDLine scores. Deep anesthesia was recorded for 6.68 ± 16.79 % of total time. Only 38.02 ± 30.34% of total time was spent in optimal sedation range. Only 2 patients had fall in oxygen saturation to less than 95 percent during the procedure and both were very brief. Both of these events occurred at PSI score range of 75-100.

**Conclusions:** As the patients spend significant amount of time in GA (including deep GA), non-anesthesia providers should desist from using propofol for these procedures.

These patents should be clearly informed (during consenting) that for varying periods of time while asleep, they will be under general anesthesia including deep general anesthesia.

Finally, by using novel monitoring tools like SEDLine, sedation can be titrated to objective endpoints eliminating periods of deep sedation and under-sedation. This might improve procedural safety, acceptability and ease of endoscopy.