The patients can sedate themselves in a safe way without anesthesiologist!

At the endoscopy unit at Värnamo Hospital it’s possible for the patients to sedate themselves using a PCA pump. Both patients and staff are very satisfied with the new alternative for sedation. The results for 2018 show a better alternative for sedation and less endoscopic procedures in the OR.

Värnamo hospital is an emergency hospital that serves 90 000 inhabitants in Sweden. The endoscopic unit makes around 2800 procedures a year. The prediction for the coming years is that the amount will increase according to new guidelines and screening of people over 65 years.

**Aim**
Fairly often people want sedation during the endoscopic procedure. The procedures therefore occupy the operation theatres, that instead could have been used for larger surgery. The staff in the endoscopic unit wished a better and more adjustable sedation alternative than Midazolam/Alfentanil.

**Method**
In 2016 a team was brought together with staff from the anesthetic and endoscopic unit. Experiences about patient controlled sedation (PCS) were collected from articles and other hospitals. A flowchart and risk analysis was formed. The staff from the endoscopic unit developed new routines after guidelines from the anesthetic unit. In the end of the year 2016 there was a functioning strategy. In total the endoscopic unit has accomplished 212 endoscopies with PCS, from 2016 until 2018.

**Who is included?**
ASA 1-2 - No allergy to peanuts/soya
16-75 years - Not pregnant
BMI < 40 - No achalassi
Able to take instructions /understand Swedish

**The procedure**
A nurse calls the patient to the endoscopic unit. An anesthesiologist is contacted if there are any questions.
- The same rules of fasting as SFAI (Swedish anesthetic organization)
- The patient fills in a health form before the endoscopy
- A checklist is asked and noted by a nurse
- Monitored with SaO2, NBP
- Anesthesiologist is contacted before PCS.
- The patient stays about 30 minutes after the endoscopy.
- The staff at the endoscopic unit is trained once a year in keeping the airways.

**Propofol sedation**
A PCA pump is used, the patient presses a button and gets 5 mg of Propofol each time. The maximum is 8 doses a minute.

**Depth of sedation Ramsay scale 2-3.**

**Result**
2018
99 scopies
No incidents related to PCS
A vasovagal reaction and one with pain problem after coloscopy.

**Gastroscopy** 34 pcs
Ramsay start 3 end 2,2
Propofol 113 mg

**Coloscopy** 48 pcs
Ramsay start 2,9 end 1,9
Propofol 185 mg

**Gastroscopy and coloscopy** 13 pcs

**Sigmoideoscopy** 4 pcs

**How do the patients experience the intervention with PCS?**

How did you experience the procedure? 

Can you consider doing the procedure the same way again?

Have we done less scopies in the OR?
Yes

**This we have learned**
Quality improvement is Teamwork
Willingness – Courage – Respect – Trust
- To work methodically with risk-analysis, and flowcharts and document makes the project proceed.
- The approach towards the patients and clear instructions are crucial for the sedation.
- Patient controlled sedation with Propofol is a safe method and well functioning for endoscopies.

**What do the staff think about the sedation?**
All the endoscopies were done as planned. The approach and instructions are crucial. It’s very important that the patient understands the importance of starting the sedation directly so that the effect of the sedation has come before the endoscopy starts. The staff is satisfied with the sedation in 98 % of the cases. During some gastroscopies the patient gets very motorically impatient, but doesn’t remember anything afterwards and is very satisfied.

**Summary**
Patient controlled sedation is a safe method and gives a functioning sedation for endoscopies for both patients and staff. The amount of planned endoscopies in the OR is almost halved.

Ann-helene.trofast@rjl.se
Wiveca.rydin@rjl.se
Sara.lindquist@rjl.se

Region Jönköpings län