Introduction
How we turn and position our intubated patients for an Endoscopic Retrograde Chole- 
Pancreatography (ERCP) is the process we have changed to improve safety. ERCP is performed 
almost exclusively with a patient in the prone position, in our Endoscopy department. In the 
past, fewer patients were intubated and patients could position themselves on their abdomen 
while still awake, and then they were sedated with Propofol and the procedure performed. Do 
to the risks of performing such a difficult procedure, that can sometimes take up to 3 hours, 
general anesthesia with intubation is being used much more often.

In our unit, with the increased prevalence in the use of general anesthesia during ERCP we 
have had to perform more frequent full body turns of fully anesthetized intubated patients 
into the prone position. This presents several challenges, the first and most concerning risk 
is for the patient. Other concerns are injury to staff, difficulty positioning the patient for the 
procedure after they are anesthetized, and procedural delays. "Successful ERCP is aided by 
good positioning of patients while under anesthesia to avoid complications that are inherent 
with prone positioning. Prone positioning complications and staff injury can be minimized 
with a little planning and a good process."

Methods
Dr. Yestrepsky, one of the anesthesiologists that frequently staffs endoscopy, developed 
in conjunction with the endoscopy nursing staff a turning process that we used whenever he is 
in the department. We decided to expand this process to all the ERCP patients because it was 
such a good technique and a good practice. The evidence was searched and with little found 
specific to our needs we used literature from surgical procedures done in the prone position, 
expert opinions and experience to develop our best practice.

Staff discussed this process to expand and refine the set up, and steps of this process. The set 
up was illustrated on a poster in the ERCP room with a description of the process. (Illustrated 
Figure 1) Please see poster for turn process.

• This process was shared with the CRNA group at a staff meeting and suggestions for 
improvement were welcomed.

• Dr. Yestrepsky spoke with the anesthesiologist group to convey the change in practice.

Endoscopy staff will now initiate this safer turning process with each ERCP. We have a lot of 
Anesthesiologist and CRNA that rotate through our unit. For those that have not participated 
in the new process they are coached before and during the turns. This has become our best 
practice for ERCP turns and standard of care.

Evidence
A literature search was done using Pubmed with little information found specific to techniques 
for positioning patients for ERCP or complications of ERCP positioning. Search was expanded 
to complications of prone positioning during surgery/general anesthesia. Topics of concern 
that these articles centered on were: displacement of the endotracheal tube and injuries due 
to increased pressure on anterior structures. Some complications due to this anterior pressure 
that we are focusing on in our process change are:

- Cardiovascular complications—including hypovolemia and cardiac arrest
- POVL (post-op vision loss)
- Pressure sores
- Nerve injury (cervical spine, brachial plexus)

"Careful planning for optimal positioning, padding, timing, as well as increased vigilance are 
evidence-based recommendations where prone positioning is required."

"Successful ERCP is aided by god positioning of patients while under anesthesia to avoid 
complications that are inherent with prone positioning."

Results
Once the process was refined and shared with staff involved our patients are consistently 
positioned in a position that helps to protect them from spine injury, nerve damage and eye 
injuries that prone positioning can sometimes cause. Also the turns are performed in a way 
that help protect the staff from injury by having a coordinated plan and by using the leverage 
of the patients weight and momentum to place them in a safe position without much need to 
reposition once prone.

Conclusions
Successful ERCP is aided by good positioning of patients while under anesthesia to avoid 
complications that are inherent with prone positioning. Prone positioning complications and 
staff injury can be minimized with a little planning and a good process.

References