Investigation of Postoperative Opioid Prescribing, Use and Patient Education in Thoracic Surgery

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Project Summary

There is an increasing awareness of the role that surgeon's play in the wide variation within and over-prescribing of opioids after surgery to treat acute surgical pain. Much of this variation and excess prescribing stems from a lack of evidence-based prescribing guidelines. Therefore, the goal of my project was to investigate the postoperative opioid prescribing and use in thoracic surgery as well as the education being distributed regarding proper opioid use, storage and disposal. The ultimate goal was to use the data we collected to create several interventions, including procedure-specific guidelines and improved patient education materials regarding opioids. For the initial project, we focused on patients undergoing open and laparoscopic hiatal hernia repair (HHR).

Action Items/Outcome

We characterized the postoperative prescribing habits and actual consumption of opioid naive patients undergoing open and laparoscopic HHR. Following open HHR, the median prescription size was 350mg OME (oral morphine equivalents), or 70 Norco vs the median patient usage which was 225mg OME, or 45 Norco. These patients only used 64% of the narcotics prescribed to them. Following laparoscopic HHR, the median prescription size was 270mg OME, or 54 Norco vs the median patient usage which was 106mg OME, or 21 Norco. These patients only used 39% of the narcotics prescribed to them.

We identified a wide variation in the prescribing of opioids after these operations. In order to better characterize what factors influence healthcare providers prescribing habits, we surveyed the thoracic PAs (who do most of the discharge/prescribing). The survey inquired about which factors contribute to prescribing habits and to what degree they contribute as well the amount of time they spend counseling on proper opioid use and disposal. We also surveyed thoracic RNs regarding the time they spend on counseling, the topics they cover in the counseling as well as the factors that contribute to their decision of when to administer adjunct pain medications (Tylenol/Motrin) during hospitalization. I shadowed in the thoracic surgery clinic

several times to observe the counseling being given by the surgeons and NPs regarding expectations for pain after surgery and opioid use. I was disappointed to find there was very little discussion at all. From the data we collected, we established evidence-based guidelines for opioid naive patients undergoing open and laparoscopic HHR. I will be meeting with the thoracic surgery faculty, PAs and RNs to discuss the results of our study as well as the guidelines to ensure their understanding and cooperation. Once the guidelines are implemented (which will hopefully be soon), we will repeat the methodology of the study to assess opioid prescribing vs actual usage, requests for refills and pain scores in order to continue to adapt the guidelines accordingly. We have also created improved patient education materials regarding the risks of opioid use, proper opioid use, storage and disposal methods that will be distributed preoperatively and at discharge as we identified less than optimal education on these topics.

Conclusion/Reflection

In conclusion, we identified wide variation within and over-prescribing of opioids after both open and laparoscopic HHR, factors that contribute to prescribing habits, and less than optimal patient counseling and education materials. We used the data collected to establish specific interventions to reduce the variation within and overprescribing as well as improve the education patients receive. This project has been one of the most impactful research experiences for me as it stemmed from a problem I observed while on my thoracic surgery rotation that I was able to assemble a team to address and create realistic and effective interventions. It was clear how important adequate pain control was after thoracic operations; however, when I inquired regarding how healthcare providers decided how many narcotics to prescribe, it was apparent that there was really no rhyme or reason to the prescribing. This project has been challenging as it has entailed collaboration with many different departments, types of health care providers and students. I've learned a lot about clear and direct communication as well as creativity and problem-solving when it comes to how best to address this topic with different healthcare providers without making them feel targeted or ridiculed. In my opinion, one of the best ways surgeons can combat the opioid epidemic is to identify how many narcotics are actually being used after an operation in order to inform prescribing guidelines that reduce the amount of excess opioids reaching our community. In addition, it was clear that there was very little counseling being done (both preoperatively and postoperatively) by all types of healthcare providers. This resulted in patients not using opioids in the most effective way and not storing them or disposing of them properly. The presence of excess prescribing with leftover pills that are not stored and disposed of properly creates a very dangerous source for narcotic diversion in our community. It is my hope that we

can continue this work within thoracic surgery to create procedure-specific guidelines for the other thoracic surgery operations as well.