



Effectiveness of the Molloy Bridgeport Observational Scale in Predicting Increased Intraocular Pressure during da Vinci Robotic Procedures

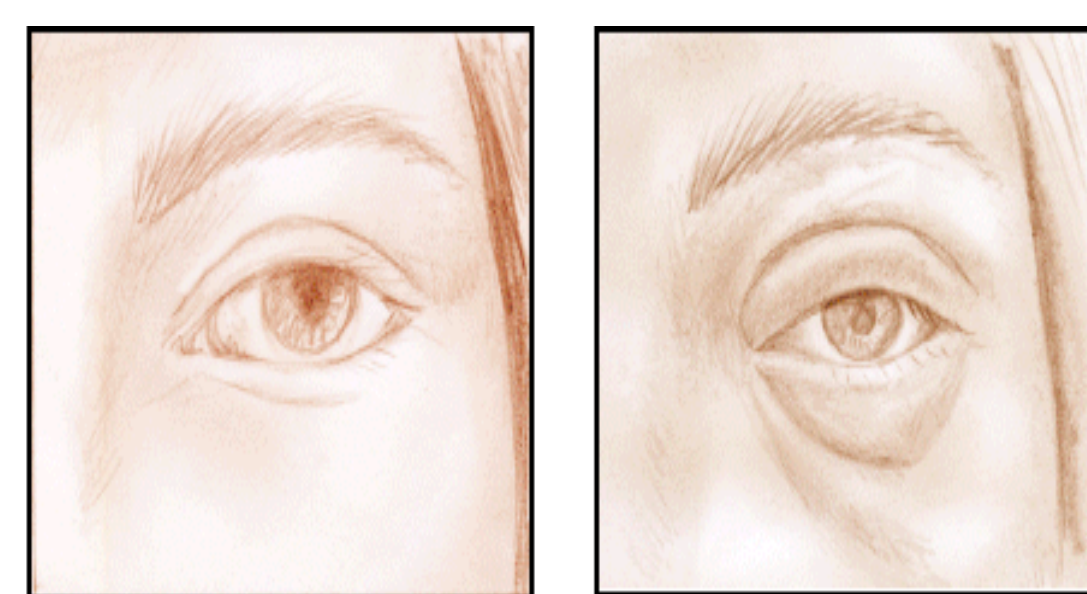


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INTRODUCTION

- Postoperative vision loss (POVL) is the result of decreased ocular perfusion to the optic nerve.
- POVL is a potential complication of da Vinci robot surgical procedures due to the need for extreme head down positioning to optimize the surgical field.
- The Molloy Bridgeport Observational Scale (MBOS) is a tool that was created to assist in the identification of signs of increased intraocular pressures (IOP), but it's relationship to actual tonometry measures of IOP in patients undergoing da Vinci procedures remains unclear.
- Therefore, this project aims to compare the MBOS to tonometry measures of IOP in patients undergoing da Vinci robotic procedures to determine the best practice for preventing POVL related to da Vinci robotic surgery positioning.

VISUALS OF EYELID EDEMA, CONJUNCTIVAL EDEMA/CHEMOSIS AND ECCHYMOSIS



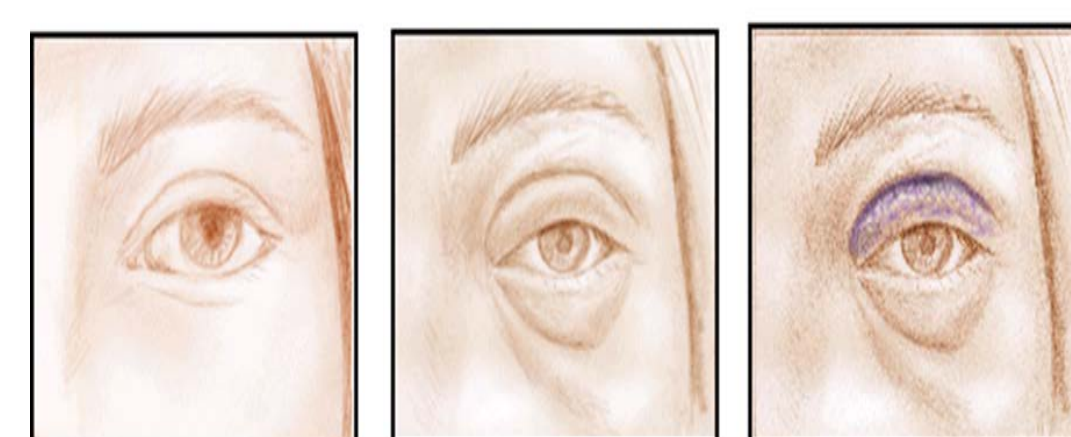
Normal eyelid Edematous

EYELID EDEMA
2.5 x baseline



Normal Conjunctiva & Cornea Conjunctival Edema

CONJUNCTIVAL EDEMA / CHEMOSIS
3.4 X baseline



Normal Edematous Ecchymotic

ECCHYMOSIS
4.3 x baseline

METHODS

- IRB approval is underway for the conduct of an observational study that aims to compare the MBOS to actual measures of IOP taken by tonometry in patients undergoing da Vinci robotic surgeries.
- The Principle Investigators used elective hours using tonometry, and has been credentialed by the study site to use this instrument in the practice
- Inclusion criteria:
 - Age > 19 years
 - Scheduled for elective da Vinci robot-assisted laparoscopic surgery
 - Surgical duration with head down position lasting \geq 120 minutes
 - Ability to read and write in English
- Exclusion criteria:
 - Medical history of glaucoma
 - Medical history of eye trauma or surgery that could alter IOP
 - Prisoners
 - Employees or students enrolled at the study site
 - Temporary or permanently decisionally impaired
 - Anesthesia staff recording MBOS values will be blinded to actual IOP measured by tonometry
 - Rescue procedure for tonometry measures exceeding 40mmHg:
 - Surgical time out with repositioning to zero-degrees and serial measurement of IOP
 - Surgical resumes when IOP normalizes

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RESULTS

- The study is pending IRB approval, and will commence late Fall 2014.



Conclusions

- Methods that accurately identify the development of increased IOP will significantly improve the safety of da Vinci procedures
- This study aims to provide evidence of methods for IOP detection that can serve as best practice for anesthesia and surgical providers in the prevention of POVL.

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