

Introduction

The TrenGuard Patient Positioning device is a neck and shoulder pad that prevents cephalad migration during surgery.

Study Aims

- Evaluate the efficacy of the TrenGuard patient position device as compared to standard methods of patient positioning.
- Evaluate any Elixhauser comorbidities associated with increased risk for cephalad migration on the operating table.

Methods

- 8 hysterectomies, 17 inguinal hernia repairs, and 9 prostatectomies which composed the 34 robotic cases.
 - 9 inguinal hernia repairs used tape
 - 25 cases used the TrenGuard.

• 15 mm of deviation was considered positive migration.

Evaluation of Trenguard Patient Positioning Device for Steep Trendelenburg Positioning During Robotic Surgery Joshua R. Volin MS-1¹, Deborah Hasenau RN³, Jason Hafron M.D.^{1,2,3}

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Results

- There was not more shift with the Trenguard than when compared with the tape (p=0.403).
- 8 patients shifted (24%).

 - None of the hysterectomies had shift while 12% of the inguinal hernias and 67% of the prostates had shift (p=0.003). procedure.

• The significant associations with shift were procedure and gender. • The significance in gender is probably tied to the

January 2, 2019. December 1995. Accessed January 2, 2019. Accessed January 2, 2019 2019. 2019. 2019.

neuroscience

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Conclusions

This was a negative study that does not allow us to draw a conclusion on whether we were able to reject the null hypothesis. Further tests should be considered with greater numbers of patients and position devices to arrive at a conclusion.

References

1) Ardavan Akhavan, Daniel M. Gainsburg, Jeffrey A. Stock. Complications Associated With Patient Positioning in Urologic Surgery. Science Direct. https://www-sciencedirectcom. huaryu.kl.oakland.edu/science/article/pii/S0090429510003390?via=ihub. Published December 2010. Accessed

2) Goskowicz R. Use of shoulder restraints during arm abduction and steep Trendelenburg's position. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/8533942?dopt=Abstract. Published

3) Klauschie J, Wechter ME, Jacob K, et al. Use of anti-skid material and patient-positioning to prevent patient shifting during robotic-assisted gynecologic procedures. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/20471916. Accessed January 2, 2019.

4) Martin JT. The Trendelenburg position: a review of current slants about head down tilt. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/7762369?dopt=Abstract. Published February 1995.

5) Romanowski L, Reich H, McGlynn F, Adelson MD, Taylor PJ. Brachial plexus neuropathies after advanced laparoscopic surgery. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/8405536?dopt=Abstract. Published October 1993. Accessed January 2,

6) Sukhu T, Krupski TL. Patient positioning and prevention of injuries in patients undergoing laparoscopic and robot-assisted urologic procedures. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/24574090?dopt=Abstract. Published April 2014. Accessed January 2,

7) Sutton S, Link T, Makic MB. A quality improvement project for safe and effective patient positioning during robot-assisted surgery. Current neurology and neuroscience reports.

https://www.ncbi.nlm.nih.gov/pubmed/23531311?dopt=Abstract. Published April 2013. Accessed January 2,

8) Takmaz O, Asoglu MR, Gungor M. Patient positioning for robot-assisted laparoscopic benign gynecologic surgery: A review. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/29428480.

Published April 2018. Accessed January 2, 2019.

9) Talab SS, Elmi A, Sarma J, Barrisford GW, Tabatabaei S. Safety and Effectiveness of SAF-R, a Novel Patient Positioning Device for Robot-Assisted Pelvic Surgery in Trendelenburg Position. Current neurology and

reports. https://www.ncbi.nlm.nih.gov/pubmed/26531773. Published March 2016. Accessed January 2, 2019. 10) Treszezamsky AD, Fenske S, Moshier EL, Ascher-Walsh CJ. Neurologic injury and patient displacement in gynecologic laparoscopic surgery using a beanbag and shoulder supports. Current neurology and neuroscience reports. https://www.ncbi.nlm.nih.gov/pubmed/28921506. Published January 2018. Accessed January 2, 2019.

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