Does Sugammadex Protect Against Postoperative Urinary Retention Following Inguinal Hernia Repair?

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Introduction

- Postoperative urinary retention(POUR) is a frequent and well documented complication of Inguinal Hernia Repair
- Incidence of this complication may be influenced by choice of neuromuscular blockade reversal after surgery
- Sugammadex, a newer neuromuscular reversal drug, has become more widely adapted for its safe and effective reversal capability
- Sugammadex directly encapsulates neuromuscular blocking agents like rocuronium, removing the antimuscarinic exposure seen with Neostigimine/Glycopyrrolate reversal, potentially reducing the risk of POUR
- The goal of this study is to explore differences in the incidence of POUR in Sugammadex and non-Sugammadex reversal

Methods

- We conducted a retrospective review of all patients who underwent Inguinal Hernia repair at our dedicated Hernia center.
- We then identified all patients who were given Sugammadex for neuromuscular blockade reversal
- The primary outcome was the incidence of clinically detected POUR
- POUR rates were then compared between patients who received Sugammadex and those who did not

Reversal Agent	POUR (n%)	No POUR (n%)	Total	χ^2 (df =1)	P-value
Sugammadex	6 (3.6%)	161 (96.4%)	167	0.39	0.53
Non-Sugammadex	15 (5.4%)	263 (94.6%)	278		

Table 1: Primary Outcomes

Outcome	Sugammadex (n%)	Non-Sugammadex (n%)	P-value
Readmission	0 (0%)	5 (1.8%)	0.20
Reoperation	0 (0%)	3 (1.1%)	0.46
Testicular pain or neuralgia within 30 days	6 (3.5%)	23 (8.3%)	0.082

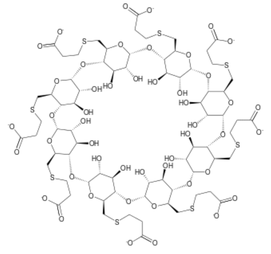
Table 2: Secondary Outcomes

Results

- Of the patients included in this study, 86.7% were male and the mean age was 57.9 years old
- The rate of POUR in all patients who received Sugammadex was 3.6%
- The rate of POUR in all patients in the non-Sugammadex group was 5.4%
- No stasticially significant difference in rates of POUR were found between the Sugammadex and non-Sugammadex group
- Secondary analysis showed no statistically significant difference in readmission and reoperation between the Sugammadex and non-Sugammdex group
- There was a nonsignificant trend of higher rates of testicular pain or neuralgia within 30 days of surgery in the non-Sugammadex group

Conclusion

- We did not identify a statistically significant difference in POUR between groups
- It is important to note that our study had an overall low incidence of POUR which limited our statistical power
- Other studies have identified a reduction of POUR with Sugammadex but its routine use should be balanced with cost-benefit considerations



References

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