



# Preferred Anaesthesia Technique in Open Inguinal Hernia Repair Procedure: Single Center Results

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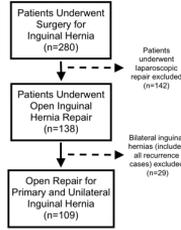
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### Introduction

- Elective open inguinal hernia repair can be performed under local, spinal, or general anaesthesia.
- While local anaesthesia is preferred in experienced centers, general anaesthesia is recommended if local anaesthesia is not feasible.
- Guidelines make no specific recommendations on the optimal anaesthesia form for open hernia repair in teaching hospitals
- We aim to compare anaesthesia forms used in primary unilateral inguinal hernia surgeries in our teaching hospital to contribute to the literature.

### Methods

- Patients underwent surgery for primary unilateral inguinal hernia
- December 2018 - December 2023
- Retrospective analysis
- Laparoscopic, bilateral and recurrence cases excluded
- Patients divided into 2 groups according to anaesthesia form (general vs spinal) and compared
- Primary outcome; To compare anesthesia forms in order to determine the appropriate technique for open repair. Secondary outcome; To demonstrate the anaesthesia form preferences in a teaching hospital and the factors that may influence these choices.



### Results

- Among 109 patients, 98 (89.9%) were male and the mean age of 61.60±14.80 years. All patients had Lichtenstein procedure and used same mesh in all patients.
- Surgery was performed under general anaesthesia in 59 (54.1%) and spinal in 50 (45.9%). All demographic and operative data presented in Table 1.
- General anaesthesia group had a higher BMI and longer operative time. Comparison of general and spinal anaesthesia groups presented in Table 2.

### Conclusion

- According to the current EHS guideline for management of groin hernia<sup>1</sup>, local anaesthesia is recommended as the first-line option in experienced centers. If local anaesthesia is not feasible, general anaesthesia is advised.
- In our study, most patients underwent surgery under general anaesthesia, and those receiving general anaesthesia had a higher BMI. This may be attributed to the technical challenges posed by higher BMI, where general anaesthesia can offer more comfort for the surgeon.
- Operative times were notably longer in patients who underwent surgery under general anaesthesia. Considering that teaching hospitals often experience extended operative durations due to resident training, general anaesthesia may be the more suitable option for primary unilateral inguinal hernia repairs in such settings.



Table 1: Demographic, Operative and Prognostic Characteristics

Variables	Total (n=109)
Age (mean)	61.6±14.8
Gender (%)	
Male	98 (89.9%)
Female	11 (10.1%)
BMI (kg/m <sup>2</sup> )	27.6±2.6
ASA	
I-II	92 (84.4%)
III	17 (15.6%)
Comorbidities (%)	
Hypertension	48 (44%)
Diabetes Mellitus	9 (8.3%)
Coronary Artery Disease	14 (12.8%)
EHS Hernia Classification (%)	
M	17 (15.6%)
L	92 (84.4%)
1	36 (33%)
2	59 (54.1%)
3	14 (12.9%)
Mean Hernia Diameter (mm)	22.3±10.9
Anaesthesia Form (%)	
General	59 (54.1%)
Spinal	50 (45.9%)
Operative Time (mins)	67.6±22.4
Surgeon (%)	
Specialist	61 (55.9%)
Resident	48 (44.1%)
Hospitalization (days)	1.5±0.9
Postoperative Complications (%)	
Seroma	7 (6.4%)
SSI	2 (1.8%)
Recurrence (%)	1 (0.9%)
Follow-up (months)	38.3±24.2

BMI: Body Mass Index; ASA: American Society of Anaesthesiologists; EHS: European Hernia Society; SSI: Surgical Site Infection

Table 2: Comparison of patients according to anaesthesia forms

Variables	GA (n=59)	SA (n=50)	p
Age (mean)	60.4±13.3	63±16.4	0.368
Gender (%)			
Male	51 (87.9%)	47 (94%)	0.466
Female	8 (12.1%)	3 (6%)	
BMI (kg/m <sup>2</sup> )	28.2±2.6	26.9±3	<b>0.023</b>
ASA			
I-II	49 (83.1%)	43 (86%)	0.604
III	10 (16.9%)	7 (14%)	
Comorbidities (%)	33 (55.9%)	31 (62%)	0.521
Mean Hernia Diameter (mm)	23.9±14.6	20.3±8.1	0.131
EHS Hernia Classification (%)			
M	10 (16.9%)	7 (14%)	0.672
L	49 (83.1%)	43 (86%)	
EHS Hernia Classification (%)			
1	19 (32.2%)	17 (34%)	0.373
2	30 (50.8%)	29 (58%)	
3	10 (16.9%)	4 (8%)	
Surgeon (%)			
Specialist	30 (50.8%)	31 (62%)	0.108
Resident	29 (49.2%)	19 (38%)	
Operative Time (mins)	69.8±13.9	65±6.5	<b>0.020</b>
Hospitalization (days)	1.7±1.2	1.4±0.8	0.238
Follow-up (months)	22.8±15.3	30.4±23.9	0.092

BMI: Body Mass Index; ASA: American Society of Anaesthesiologists; EHS: European Hernia Society; GA: General Anaesthesia; SA: Spinal Anaesthesia