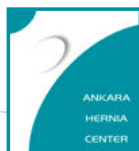


READMISSION AND OVERNIGHT STAY RATES IN DAY-CASE INGUINAL HERNIA REPAIR



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Inguinal hernia repair is suitable for day surgery. Same day discharge is a routine procedure in most specific hernia centers and very common in some hospitals where day-surgery units have been established. The usual anesthesia type for an inguinal hernia repair in day-case setting is local anesthesia, while some centers prefer regional blocks and even general anesthesia.

Overnight stay may be needed sometimes for some patients undergo inguinal hernia repair. Besides, re-admissions after discharge may be observed rarely due to certain reasons.

We aimed to assess the frequency of discharge delay, unplanned overnight stay, and readmission in a day-case based specific hernia center by using a prospective protocol form.

Patients and Methods

400 consecutive patients who underwent tension-free inguinal hernia repair with prosthetic mesh within a 2-year-period were recorded in the study form. All patients were allowed to ingest clear fluids until 2 hours to surgery and received 15 ml/kg/h intravenous fluid throughout the operation. Duration of operation was recorded as between the time the anesthetist inserted an intravenous canula and skin closure was completed. At the end of the surgery all patients proceeded directly to the observation area. Home readiness was assessed at every 15 min. using the Postanesthesia Discharge Scoring System (PADS) which is given in Table 1. A 10 cm visual analog scale (VAS) was used to assess pain and nausea. Scores higher than four were selected for intravenous pain medication. Time to home readiness and actual discharge times were recorded. Any case discharged after 120 min. was recorded as discharge delay. We describe the cases returned to the center or other institutions after discharge within the first 24 hour as readmission.

Table 1. Postanesthesia Discharge Scoring System (PADS)

Vital signs	
BP and pulse within 20% of preoperative baseline	2
BP and pulse within 20%-40% of preoperative baseline	1
BP and pulse within > 40% of preoperative baseline	0
Activity level	
Able to ambulate at preoperative level; no dizziness	2
Requires assistance	1
Unable to ambulate	0
Nausea and vomiting	
Minimal successfully treated with PO medication	2
Moderate successfully treated with IM medication	1
Severe continues after repeated treatment	0
Pain acceptability	
Yes	2
No	1
Surgical bleeding	
Minimal does not require dressing change	2
Moderate up two dressing changes required	1
Severe more than two dressing changes required	0

Patients scoring ≥ 9 are fit for discharge

Results

Age, gender, ASA score and weight of the patients are shown within the Tables 2 and 3. More than 90% of the cases were stratified as ASA I or II. Operation time lengthened to as long as 180 min. in obese patients and patients with multi-recurrences. Local anesthesia plus intravenous sedation was employed in 394 cases (98.5%). Mild intravenous sedation was observed an adequate support in most cases local anesthesia used. Spinal blockade was set in only one patient. 5 patients were operated under general anesthesia due to personal preference in 3 and intolerance to local anesthesia in other two.

Table 2. Mean values of the parameters.

	Mean	Minimum	Maximum
Age (year)	50.2	15	73
Weight (kg)	78.3	44	120
Duration of surgery (min)	69.3	20	180
Home readiness time (min)	99.3	30	310
Discharge time (min)	101.3	30	310

Table 3. Frequencies of the parameters.

Gender	n	%
Male	374	93.5
Female	26	6.5
ASA physical status		
I	259	64.8
II	109	27.3
III	31	7.7
IV	1	0.2
Level of sedation		
Mild	379	94.8
Moderate	21	5.2

92.2% of the patients were discharged when they are just ready to go home according to PADS. The mean interval between homereadiness and discharge was 22.25 min. in cases with discharge delay (only an average of 1.73 min. for whole series). Within the cases discharge delay was recorded only 9 (2.25%) were due to medical reasons. The main reasons were postural hypotension and drowsiness which responded to short-time additional bed rest. 47 patients preferred to stay a longer without any problem.

No patient developed urinary retention. Leg weakness due to transient femoral nerve palsy was observed in five patients (1.25%) and a discharge delay was recorded one of these cases.

One unplanned overnight stay was decided by the anesthetist for a patient with intraoperative aspiration suspicion. 3 readmissions were recorded (0.75%). One patient was re-hospitalized with a spot high fever after bilateral repair (this was the second unplanned stay; totally 0.5%). He went home in the morning and developed no further complications. The second patient returned to the center and needed 2 more hours bed rest. He was discharged uneventfully at the same day. Another patient informed the center that he was hospitalized in a community hospital. He received no treatment and sent home after a one-hour observation. All patients were discharged after an overnight observation without treatment. Two patients who had general anaesthesia displayed a VAS score higher than 4 and received NSAID. There was no correlation between gender, weight, ASA physical status, level of sedation, type of anaesthesia, duration of surgery and discharge delays or readmissions.

Comment

Prolonged postoperative stay and unanticipated hospital admission are measures of quality and safety for day case surgery. Factors delaying discharge from a day case surgical unit are mentioned to be female gender, increasing age, congestive heart failure, long duration of surgery, general anaesthesia, spinal anaesthesia, postoperative nausea vomiting (PONV), pain, drowsiness, transient femoral nerve palsy and no escort. The main reason for readmission is related to surgical complications is bleeding, while PONV, unacceptable pain and dizziness are anaesthesia related reasons. Discharge delays and readmissions in our center were all due to postural hypotension and dizziness except for one patient with spot fever. Since the majority of the patients were operated with local anesthesia pain was not a discharge delaying factor in this series.

Conclusion

Since patient safety is everyone's priority we must ensure that patients are discharged home appropriately. Discharge protocols can provide this. Readmission rate and overnight stay is low after day-case inguinal hernia repair. This study has shown again the safety and reliability of local anesthesia for elective inguinal hernia repair in outpatient basis.

Selected Readings

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