



# Inguinal Hernia; Open Surgery Vs Laparoscopy

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## Abstract

**Abstract:** The past 50 years, surgeons have wrestled with the question regarding the contralateral inguinal region in an infant or child with a known unilateral inguinal hernia. Repair one side or both. Laparoscopic hernia repair is an effective and increasingly popular alternative to open herniotomy.

**Material and Methods:** Prospective study, 20 children underwent either LS or OS for PIH. Operation time, intra- and postoperative complications, postoperative pain, postoperative stay, cosmesis, and the size of testis were recorded and compared for differences in outcome. Patients were followed up for an average of 6 months.

**Results:** operative time longer in LS for unilateral but shorter in bilateral. The difference in pain perception between LS and OS was insignificant. Immediate postoperative recovery (<3hr) was delayed in a greater proportion of children undergoing LS but duration of hospital stay was similar.

**Discussion:** Scrotal edema was observed in 2 cases following OS, testicular atrophy significant in OS. Iatrogenic testicular malposition significant in open surgery.

**Conclusion:** The trend toward greater application of the laparoscopic technique to hernia repair seems warranted to improve the sensitivity of diagnosis, the protection of vas, vessel, and sliding hernia sac content, and the placement using magnified vision of sac closing sutures. Minimally invasive techniques may be particularly advantageous for the diagnosis and the treatment of both direct inguinal hernias as well as femoral hernias.

**Keywords:** Inguinal hernia; Open herniotomy; Laparoscopy herniotomy

## Background

Inguinal hernia always caused by persistence of peritoneal vaginal canal, most time requires a surgical correction and can be done without any complication [1].

50 years ago, asking regarding the contralateral inguinal region is the big dilemma [1,2] in management with a high number of publications about contralateral hernia post repair.

Laparoscopy in hernia repair seems to be more popular than open over time and technology evolution [1].

## Material and Methods

Prospective study include, 20 children underwent either

Laparoscopy Surgery (LS) and 20 child with open Surgery (OS).

Laparoscopy surgery technique is the same for all patients Under general endotracheal anesthesia, supine position, with little trendelenburg, lower abdomen wall, Groin and scrotum was prepared end draped, surgeon and assistant at the head, in opposite position of the inguinal hernia region, monitor at the foot, respect of basic science of laparoscopy surgery, surgeon, operative site, monitor and the triangulation law. We use Hossen technique with transumbilical 5mm scope and two working port in right and left flank position. Intra abdominal pressure at 8-10mmHg. Atraumatic forceps and two needle holder [3]. Emptying bladder

before surgery is mandatory. We proceed with sac closure for all patients (Figures 1-4). After finishing, all port sites were closed by one stitch. Parameter study concern: Operation time, complication preoperative and post-operative Pain evaluate with VAS scale,

hospital stay duration. The size of gonad and cosmetic aspect were analyzed in outcome. Patients were following up for 3 and 6 month post-operative.



Figure 1



Figure 2

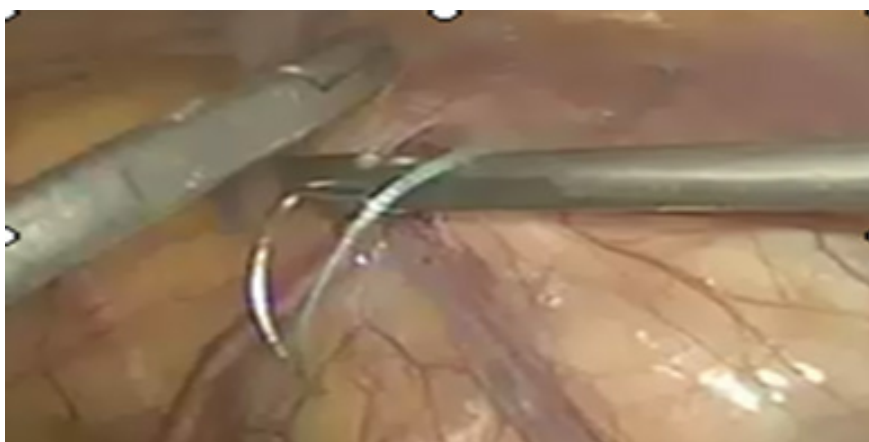


Figure 3



**Figure 4**

## Results

20 patients was operated with technique detailed before (8 girls and 12 boys), age between 3 and 14 years old, average 5.5 years old. 4 hernias was bilateral and 3 recurrent hernia (operated via open technique). Operative time 20-55min time decreasing with learning curve.

All cases completed without conversion, and no intra operative complication.

Post operative Analgesia was indicated in all patients.

## Discussion

Laparoscopy diagnosis in inguinal hernia used first time to evaluate controlatéral inguinal region either by transumbilical or transinguinale [4-6].

Speaking about metachronous hernia demonstrate the main problem in the management of inguinal hernia and postoperative outcome regarding patent processus vaginalis [5] making some surgeon doing bilateral herniotomy in same operative time [7].

-operative time longer in laparoscopy for unilateral but shorter in bilateral form.

-pain VAS scale degree was insignificant.

-recovery was immediate in OS delayed for 3 hours in LS population immediate

-Day care surgery in both techniques.

-scrotal edema and hydrocele may complicated open surgery option [8], In our study that complication found in 2 cases post open herniotomy.

-testicular atrophy in significant number in open herniotomy [9, 10].

-malposition testis higher in open surgery

-vas injury may be accidently damaged in 1.6% [11].

Laparoscopy is another way to look in the operative site, and should be indicated over time and specially in cases of bilateral inguinal hernia [12] and recurrent inguinal hernia.

## Conclusion

laparoscopy seems warranted to improve the degré of

sensitivity of controlatéral patent processus vaginalis diagnosis, no vas injury, vessel, and be sure for hernia sac content, and added the benefit of magnified vision. Minimally invasive techniques may be particularly advantageous for the diagnosis and the treatment of both direct inguinal hernias as well as femoral hernias.

## Acknowledgment

None.

## Conflict of Interest

No conflict of interest.

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