

## Case Report

# Laparoscopic total extraperitoneal approach for repair of a giant inguinal hernia

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### ABSTRACT

Giant inguinal hernias are typically described as those which reach patient's mid-thigh level in upright position. These present a challenge to the surgeon as surgical repair is technically challenging. Although conventionally open repairs have been done for giant inguinal hernias more recently laparoscopic techniques are being adopted. Total extra peritoneal (TEP) and trans abdominal pre peritoneal (TAPP) are two common laparoscopic approaches used. Here we present a case of a 64-year-old patient with a long standing giant inguinal hernia. Hernia was repaired with a TEP approach and patient's recovery was satisfactory.

**Keywords:** Giant inguinal hernia, TEP, TAPP

### INTRODUCTION

Inguinal hernias are one of the most common conditions a surgeon is faced with. Its treatment has evolved over the times.<sup>1</sup> Except for a minority of patients in whom a wait and watch approach is adopted, most patients are successfully treated with surgery.<sup>2</sup>

There are over a hundred techniques described for hernia repair ranging from tissue repair and open mesh repair to laparo-endoscopic mesh repairs.<sup>3</sup>

Total extra peritoneal (TEP) has considerable benefits like early return to activity, less postoperative pain, smaller scar and no complications associated with pneumoperitoneum as compared to open mesh repair and TAPP.<sup>4</sup>

However, for larger inguinal hernias open technique has been conventionally used due to technical difficulties anticipated with TEP approach.

Here we present a case of a 64-year-old patient with a long standing giant inguinal hernia which was repaired with a TEP approach and patient recovered satisfactorily.

### CASE REPORT

A 64-year-old male patient presented with complaint of right inguinal swelling which had gradually increased in size over past 10 years and was causing dragging pain. Swelling was reaching up to his mid-thigh level when he presented to us (Figure 1). Swelling reduced partially when he used to lie down. Patient was also a long standing diabetic on insulin.

On examination he had a giant right inguinal hernia which could be reduced (Figure 2). There were no features of obstruction or strangulation. Patient's haematological work up was normal and blood sugar levels were under control.

Decision was taken to proceed with TEP for hernia repair. Anaesthetic evaluation was done and patient was

explained about the procedure and need for conversion to another approach should the need arise.



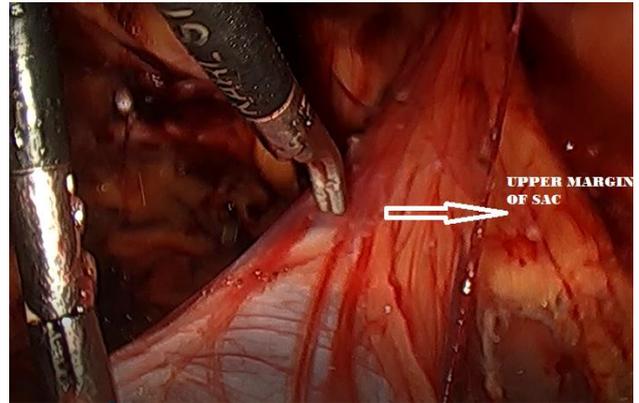
**Figure 1: Giant right sided inguinal hernia at time of presentation.**



**Figure 2: Hernia reduced pre operatively.**

Patient was catheterized before surgery. A 12 mm infra umbilical and two 5 mm ports in midline, below the first port were created. Hasson's cannula was used in infra-umbilical port. There was a large hernial sac which was separated from cord structures and was dissected till its distal margin was seen (Figure 3). Sac was reduced completely. Spermatic cord was skeletonised. A large pore, monofilament polypropylene mesh of dimensions 15×15 cms was rolled and passed through Hasson's cannula. Mesh was spread to cover the defect and was

fixed to abdominal wall and pubic symphysis using tackers (Figure 4).



**Figure 3: Intra operative picture showing distal margin of sac.**



**Figure 4: Polypropylene mesh placed and fixed with tackers.**



**Figure 5: Postoperative day 1 image.**

Patient's post-operative recovery was uneventful. Foley's catheter was removed on first post-operative day and patient was discharged (Figure 5). Patient has been completely asymptomatic on 2 weeks follow up.

## DISCUSSION

Giant inguinal hernias are described as those hernias in which the sac reaches below the mid-thigh level of the patient.<sup>5</sup> These are usually long standing and technically challenging for a surgeon. There are no standard protocols describing an ideal surgical approach for these hernias. Open mesh repairs, TEP and TAPP have all been described for this.<sup>6</sup>

In a prospective study comparing 10555 open mesh (Lichtenstein) repairs with 6833 TEP repairs in unilateral inguinal hernias, there was no difference in recurrence rates however TEP had lesser postoperative pain and complications rate.<sup>4</sup>

Meta-analyses have found no significant differences in outcomes and recurrence rates between TEP and TAPP in inguinal hernias.<sup>7</sup> They both provide advantage of correcting bilateral hernias with same incision over open repairs however TEP has additional advantage of not requiring pneumoperitoneum over TAPP.<sup>7</sup>

In our experience we have also found that placement of a larger mesh and complete separation of mesh from abdominal viscera is more difficult in TAPP as compared to TEP.

Thus in our opinion TEP should be an option for giant inguinal hernias which are reducible in elective setting with proper equipment and experienced surgeon.

## CONCLUSION

Giant inguinal hernias are a challenging condition for a surgeon. Open repairs are associated with higher complication rates but have been advocated as they are technically less demanding than laparo-endoscopic techniques.

TEP has several benefits over open approach like smaller incisions, use of a larger mesh and placement of mesh in pre peritoneal space. TEP also doesn't have complications associated with pneumoperitoneum that may be encountered in TAPP.

In proper setup and experienced hands TEP is a viable and desirable approach for giant inguinal hernias. However proper case selection and low threshold to covert to other approach should be there.

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