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OUR EXPERIENCES WITH ABDOMINOPLASTY ALONG WITH HERNIOPLASTY FOR INCISIONAL HERNIA REPAIR IN INDIVIDUALS WITH ABDOMINAL WALL LAXITY

General Surgery

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ABSTRACT

Incisional hernias make up to 80% of ventral hernias that surgeons encounter. After median laparotomy, approximately 2-20% of patients will develop an incisional hernia. In this study, we combined hernioplasty with abdominoplasty for incisional hernia repair in individuals with abdominal wall laxity. Repair was obtained with primary fascial closure and reinforcement with an onlay prolene mesh which was combined with abdominoplasty. Techniques for abdominoplasty include the use of suprapubic crease incision and the resection of excess skin and subcutaneous tissue. Skin excess can lead to both functional problems and profound dissatisfaction with appearance. Correcting excess skin could improve all these corollaires, including body image. The determination of whether a combined abdominoplasty/ hernia operation is possible will be determined by the size, type, severity of hernia, the type and complexity of abdominoplasty and surgeons experience. A combined abdominoplasty with hernioplasty has many advantages; saves money, saves time, pain, discomfort, psychologically and cosmetically better scar and avoids a second surgery

KEYWORDS

Incisional hernia, Abdominoplasty, Hernioplasty.

1. Introduction:

Incisional hernia remains a frequent complication of abdominal surgery, with a reported incidence of 2% to 20%.[1] Korenkov et al[2] defined incisional hernia as "Any abdominal wall gap with or without a bulge in the area of a postoperative scar perceptible or palpable by clinical examination or imaging". Clinical symptoms of incisional hernias range from virtually none to serious limitation due to hampering of the digestive tract or endangered skin.[3] The use of prosthetic materials for incisional hernia repair has significantly lowered the reported recurrence rates.[4] Traditional abdominoplasty techniques include the following procedures: (1) "dermolipectomy" for removal of excess fat and skin, (2) "plication" of the anterior rectus sheath for muscle diastasis, and (3) transposition of the umbilicus to a new location in the abdominal wall skin.[5] Although bariatric procedures may produce impressive weight loss, people who achieve massive weight loss are often unhappy with the hanging folds of skin and subcutaneous tissue that remain.[6] Abdominoplasty wherein we remove excess adipose tissue, redundant flaccid skin is done along with hernioplasty (on lay) for incisional hernias in individuals with abdominal wall laxity to have a better cosmetical outcome.

2. Aims and Objectives:

The aim of the study was to evaluate if hernioplasty combined with abdominoplasty is a safe procedure to the patients compared to conventional hernioplasty in regards with the complications, surgical outcomes and patient satisfaction.

3. Materials:

We conducted a retrospective comparative study at Department of General Surgery, ASRAMS Hospital, Eluru. A total number of 60 patients were taken up for the study out of whom 30 patients underwent abdominoplasty along with hernioplasty technique and 30 patients underwent hernioplasty alone. Patients were randomly allocated to each group. The study was conducted over a period of 12 months from june 2015 to may 2016.

4. Criteria for evaluation:

Inclusion criteria –
Age: Any age
Both sexes
Patients who had incisional hernia with abdominal wall laxity
Exclusion criteria -
Patients who did not give consent for the study

5. Methods:

Parameters that were used for comparing abdominoplasty and hernioplasty with hernioplasty alone are:
Duration of surgery
Mean hospital stay
Complications of surgery :
Surgical site infection
Seroma
Flap necrosis
DVT
Iatrogenic perforation
Recurrence

6. Surgical Technique:

Our surgical technique (abdominoplasty with hernioplasty):

All operations were performed under epidural anaesthesia. The suprapubic transverse skin crease incision is given. Slant incision of subcutaneous fat is made and is bevelled upwards. Flap is raised and dissection carried out in cephalad direction in plane superficial to rectus sheath. Flap were raised beyond the umbilicus superiorly up to costal margin. While raising the flap, perforator vessels were identified and preserved. Haemostasis was meticulously secured and the sac was opened if hernia was irreducible otherwise sac was inverted by approximation of its lateral edges with continuous prolene sutures. Rectal plication done for divarication of recti. After that onlay polypropylene mesh was placed with 5cms overlap onto normal tissue and is secured with interrupted monofilament prolene sutures to cover the hernial defect and to strengthen abdominal wall. Umbilical fixation is made by plicating the stump in order to give a natural dip in the new umbilical opening. After the plication, the skin and subcutaneous tissue is retracted down over to the lower suprapubic incision. Two suction drains were placed and skin closed with 2-0 ethilon interrupted sutures. Aggressive excision with tight closure is avoided. Before closing the wound, the thickness of both the flaps is checked. If need be, the flaps are defatted so that the proper contour is achieved.

Figures showing a patient with incisional hernia

Figure showing flap elevation in the plane superficial to rectus sheath

Figure showing hernia sac after elevation of flap

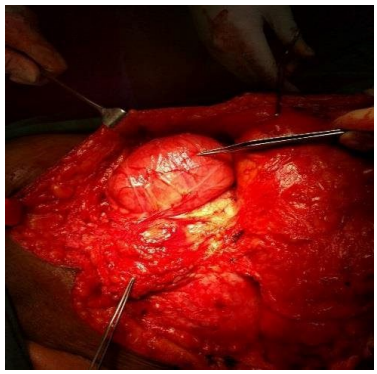

Figure showing resection of excess skin and subcutaneous tissue

7. Follow-up:

Postoperatively in selected cases, patients were immediately started with low molecular weight heparin to prevent DVT. Abdominal binder is suitably provided. Drains were removed when there was < 30 ml of drainage in 48 hours. Mean hospital stay was estimated. Follow up of the patients in outpatient clinics every week, in each visit we examined the patient for wound infection, seroma, haematoma and other complications. They were also examined for recurrent hernias.

Post-operative picture (abdominoplasty with hernioplasty):

7. Results:

The results of the study in a span of one year were presented here. Results were assessed with following parameters:

1. Duration of surgery: Mean time for abdominoplasty with hernioplasty was 120-180 minutes, while for hernioplasty alone was 100-150 minutes.
2. Mean hospital stay: It was 8-10 days for hernioplasty with abdominoplasty, while for hernioplasty alone was 6-8 days
3. Complications:

- Surgical site infection:
  1 (3.3%) case of surgical site infection each noted in both the groups
- Seroma:
  In abdominoplasty with hernioplasty – 3 (10%)
  In hernioplasty – 4 (13.3%)
- Flap necrosis:
  None in both groups.
- Deep vein thrombosis:
  None in both groups.
- Iatrogenic perforation:
  1 (3.3%) case in abdominoplasty with hernioplasty group.
- Recurrence:
  None in both groups.

9. Discussion:

Abdominoplasty with hernioplasty is a gratifying procedure for correction of anterior abdominal wall defects along with correction of abdominal contour defects. Here defect in abdominal wall is dealt with onlay mesh repair and is combined with removal of redundant flaccid skin, excess adipose tissue giving a more aesthetic outcome. An ideal abdominoplasty should be with least morbidity and postoperative disability with less visible scars with minimum hospitalization times. For this, the surgeon needs some practice of the incision design, flap elevation and suturing techniques. Particular attention to each of these avoids seroma and dog ears.

In our study, following hernioplasty and abdominoplasty for incisional hernia repair, the incidence of seroma formation was 10% and the incidence of would infection was 3.3% which were treated by dressing and systemic antibiotics and secondary suturing.

In our study, the incidence of seroma following hernioplasty alone was 13.3% and following hernioplasty and abdominoplasty was 10%. Mazin (2007),[7] found that the incidence of seroma formation following incisional hernia repair by mesh was 17.3%. Roshdy H et al[8], reported seroma formation after Combined Abdominal Dermolipectomy - Hernioplasty was 9.5%.

In our study, the incidence of surgical site infection was 3.3% in both groups. Roshdy H et al[8] reported 3.8% of minor superficial wound infection and 1.9% of severe wound sepsis.

In our study, iatrogenic perforation was 3.3% in group with hernioplasty and abdominoplasty. Carbajo[9] reported 3.3% iatrogenic perforations in cases of laparoscopic incisional hernia repairs. Although there is a case of iatrogenic perforation in combined hernioplasty and abdominoplasty group, this can be attributed to the complexity while reparing incisional hernia but not to abdominoplasty.

In our study, recurrence was 0% in both the groups. The recurrence rate of hernioplasty in many studies such as Carbajo[9] reported recurrence rate of 4.4% while Le Blanc[10] reported 9% and Heniford[11] reported 3.4%.

In our study, mean hospital stay to our patient was 6-8 days in group that underwent hernioplasty alone, and was 8-10 days in group that underwent hernioplasty with abdominoplasty. While Roshdy H et al[8], reported mean hospital stay after Combined Abdominal Dermolipectomy - Hernioplasty was 8.2 days.

In our study, mean time for abdominoplasty with hernioplasty was 120-180 minutes, while for hernioplasty alone was 100-150 minutes. While Roshdy H et al[8], reported mean duration of surgery after Combined Abdominal Dermolipectomy - Hernioplasty was 106-315 minutes.

In Ortega J et al study[12], there is not an increase in the rate of

complications when panniculectomy is associated with other procedures.

10. Conclusion:

Hernioplasty combined with abdominoplasty is a safe procedure without increase in the rate of complication and with good functional and esthetic results.

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