SUMMARY AND CONCLUSIONS

In present study, a total of 206 patients having 243 surgical interventions were enrolled as per inclusion criteria, but 20 patients having 23 interventions were not completed the 90th day follow up, so as per protocol they were excluded from the study and 186 patients with 220 patient interventions were included for finally analysis. For further follow up to 180th day, 10 patients had not turn up, so we have done ITT (Intension To Treat) for those patients and their previous finding was treated as their 180th day follow up.

In our study patients from age 18 to 87 years with mean age of 49.8 years presented with hernia, which were 102(46.4%) left side and 118(53.6%) on right side; 152(81.7%) unilateral hernia and 34 (18.3%) bilateral hernias; 99 (45%) indirect, 118 (53.6%) direct and 3(1.4%) had combined in nature, with 164(75%) bowel and 56(25%) omentum in as sac content.

The size of hernia was (<4cm) in 66(30%), 4-8 cm in (56.8%) and > 8cm in 29(13.2%) of patients with its extent within inguinal canal in 88(40%), Beyond external ring but not in scrotum in 125(56.8%) and in the scrotum in 7(3.2%). There were 140 (63.6%) patients were presented without pain while 80 (36.4%) with had pain of which 47(58.8%) had dragging and 33(41.3%) had dullache. More than 50% of these patients had associated systemic problems which included COPD (39), HT (38), DM (17), IHD (17) in various combinations and smoking (53) associated risk factors. All the patients controlled for systemic conditions before surgery.

The patients were operated for Lichtenstein onlay hernioplasty under general anesthesia in 3(1.4%), local anesthesia in 24 (10.9%) and spinal anesthesia in 193 (87.7%) with, commonly 7 or 8 cm incision with mean length of 7.31 cm. In 165 (75%) patients nerves were isolated, 145 (66%) cremasteric skeletonization done and 11(5%) patients had injury to either of three nerve or its branches, without any spermatic cord injury. The patients had defect size < 1.5 cm in 49(22.3%), between 1.5 to 3 cm in 124(56.4%) and > 3 cm size in 47(21.4%), of which 125(56.8%) required posterior wall defect placation or ring closure. The commonest size of mesh used was 8*7 cm size mesh in 154(70%) with preferred method of fixation being intermittent suturing 196(89%) using polypropylene 193(87.7%) with size 00 (81%). The hernioplasty completed 30-60 minutes in 190(86.4%).

The mean period of injectable analgesia was 1.75 days and 6 days of oral analgesics. The patients had average 11.7 days to return routine to work. The wound infection rate was 5.5%.

Our study had shown that, pain incidence in early postoperative period was 207(94.1%) on 7th day and 98(45.5%) on 30th day. The incidence of postoperative chronic pain was
30(13.6%) on 90th day and 14(6.4%) on 180th day. Detail study of chronic pain had shown that 24 (10.9%) had mild pain, 3(1.4%) had mild pain but occasional taking drugs and 3(1.4%) had moderate pain but not taking any drug on 90th day. On 180th day, 14 (6.4%) had chronic pain of which 12 (5.5%) had mild pain while 2 (0.9%) patients had moderate pain but none of the patients were taking any analgesics.

On further analysis of pain with various factors we concluded as follows:

- There was significant association between age of the patients' age and pain. Chronic pain and the severity of pain decrease with advancing age. But with extended follow up it is not observed so.
- There was weak relation between side hernia and chronic pain but no association of unilateral or bilateral hernia to chronic pain
- There was weak association of large hernias with chronic pain.
- There was significant association (p=0.012) but weak correlation between cremasteric skeletonization and chronic pain on 90th day.
- There was no significant association between isolation of nerve with early post operative pain at 30th day or pain at 90th day, but have definite association with long standing post operative chronic pain and its severity at 180th day. Accidental or iatrogenic injury to either of nerve branches had significant association with postoperative chronic pain and its severity.
- The operative time more than 60 minutes was associated with postoperative pain.
- The analgesics requirement is having direct relation with the severity of the pain.
- The early postoperative pain and its severity had strong relation with postoperative chronic pain.
- There was a weak association between wound infection and return to routine work. But there was relation between wound infection and chronic pain.
- There was no significant association of post operative chronic pain with extent of hernia, preoperative hernia, content of the sac, type of anesthesia, sizes of incision, posterior wall defect and defect closure, mesh size, types of suture material (prolene or Vicryl), size (0 or 00) and method of suturing either continuous or intermittent stitches.

In our series no patient had recurrence of hernia up to six months of follow up.