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The Prevention of Reherniation in Anterior Component Separation Technique

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The Anterior component separation technique (ACST) is an effective method for reconstructing large midline abdominal wall incisional hernias. This technique can restore abdominal wall functionality for defects up to 15cm at the waistline. But the reconstruction of defects is slightly more difficult at the epigastrium and suprapubic region. Repair of a midline incisional hernia with ACST was performed on 55 patients at Toho University Omori Medical Center between June of 2003 and May of 2015. ACST without mesh was performed on 46 patients (83.6%) and reherniation after surgery occurred in 3 patients (6.5%). All patients were women, between the ages of 74 and 84 years old. Location of reherniation was in the suprapubic region for all cases.

Reherniation appeared within 7 to 9 months of the operation. Repair of the reherniation region was not performed, because there was only minor bulging and the patients did not complain of any pain or discomfort. On the other hand, ACST with underlay mesh (polypropylene soft mesh) was performed on 9 patients (16.4%). The mesh was placed in the retromuscular/preperitoneal space. There were no occurrences of reherniation for ACST with mesh. Repair of large midline incisional hernias using ACST with underlay mesh is more effective in preventing the occurrence of reherniation when performed in the epigastrium and suprapubic regions compared to ACST without mesh.

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Laparoscopic Anterior Component Separation a Versatile procedure

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Introduction: closure of midline in a defect larger than 8 cms is a challenge in Open as well as Laparoscopic Ventral Hernia Repair; Laparoscopic Component Separation is a procedure to help us overcome this by enabling closure of midline in Open, Laparoscopic repair or Hernia with mesh erosion/infection surgery. We present a series of Eight cases of Ventral Hernia repair where Laparoscopic Anterior Component separation was used.

Material and Methods: All patients with defects larger than 8cms requiring Component separation for midline closure, operated between January 2015 to August 2016, were included for the purpose of this study. Four of these patients underwent Open Ventral Hernia repair with Laparoscopic Anterior Component Separation; three patients underwent total Lap Ventral Hernia repair with Laparoscopic Component Separation. One Patient had ulcer with mesh erosion into bowel, hence no mesh repair was performed.

Results: The average Hospital stay was 6.2 days. One patient developed Superficial Surgical site infection. All the patients had closed suction drains which were removed once drainage was less than 30 ml. No recurrence was observed in the immediate postoperative period. No Seroma formation was observed in any patients.

Conclusion: Laparoscopic Anterior Component Separation is a versatile procedure which can be combined with open as well as Laparoscopic Ventral Hernia Repair.

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ENDOSCOPIC COMPONENT SEPARATION: A NOVEL TECHNIQUE FOR MANAGEMENT OF LARGE VENTRAL HERNIA

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Introduction: Management of large ventral hernia is challenging as the closure of defect will be under tension and associated with higher recurrence rates. Component separation technique helps in tension-free closure of large defects. It was first described in 1990, since then various modifications have been described to reduce morbidity, minimise recurrence and address the complications associated with previous techniques. Endoscopic component separation is a newest addition to the list, which aims at providing all the benefits of the open component separation with reduced morbidity. In our technique, component separation is done completely by laparoscopic approach with conventional instruments and is relatively easy to master.

Materials and Methods: It is a prospective observational study. Various intra-operative, post-operative and follow up parameters were analysed.

Results: Between October, 2015 to May, 2016, we operated on 8 patients with large ventral hernia, among which four patients had recurrent ventral hernia. All patients underwent laparoscopic anterior component separation followed by closure of defect and intraperitoneal placement of composite mesh. In one patient, the procedure was combined with laparoscopic sleeve gastrectomy for morbid obesity. Mean size of the defect was 14.4cms (10-20cms). Mean operative time was 185 minutes. Mean post-operative hospital stay was 6.75 days (3-10 days). One patient developed seroma postoperatively which resorbed with conservative management. None of the patients had skin necrosis, persistent pain and recurrence during follow up.

Conclusion: In experienced hands, endoscopic component separation is feasible and safe option for management of large ventral hernia.

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Modified component separation technique for the treatment of massive incisional hernias

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Purpose of the study was to compare different modifications of Component Separation Technique (CST) in the treatment of massive incisional hernias. Main disadvantage of classic CST is that those relaxing incisions might be potential weak places for recurrence. For this reason we introduced our modification which utilizes 3 mesh strips for reinforcement the bilateral incisional areas and midline. Studied 186 massive hernias from total 711 incisionals. Male/female 119/77. Mean BMI 36.39% hernia defect size was more than 15 cm (largest 50 cm x 25 cm) in all patients. Concomitant diseases 156 (83.8%). The following modifications of CST were used for repair: Ramirez (original) - 37 (I group) Ramirez with triple mesh reinforcement 61 (II group); Ramirez with Rives - 14 (III group); Total 112. Mean operation time, complication rate, mean length of stay in hospital and recurrence rate (period up to 2 yrs) were compare for all groups. Mean operation time was 135 mins for the I group, 145 mins. for the II and 150 for the III ($p>0.1$). There was also no significant difference ($p>0.1$) in complications (mean 38,3%) and length of stay (6.4 days) for all groups; Recurrence rate for the I group was 10.8 %, for the II (6.55%) and III - (7.1 %) - $p<0.001$. Considerable increasing of the abdominal capacity is achieved only by CST. CST with triple mesh reinforcement of anterior abdominal wall gives less recurrences comparing with classic CST.

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Component Separation Technique Transverse Abdominis Release Ventral Hernia is a common disorder. Many of them have multiple defects which grow with time to become Large Ventral Hernia, requiring complex procedures for repair. We will discuss TAR (Transverse Abdominal Release), in detail in treating Large Ventral Hernia

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Component Separation Technique Transverse Abdominis Release

Incisional Hernia occurs in 11 to 23 % of laparotomies. If untreated, often, it grows in size.

These Large Ventral Hernia leads to lot of functional derangements & compromise the quality of life. Traditionally, these hernias were treated with "Bridging" techniques. A mesh is put as an Onlay, Inlay, Sublay or Underlay by open or laparoscopic approach. However, because of disparity between living abdominal wall muscles & non-living mesh, there is decreased abdominal wall compliance & patients continue to have functional disability.

Closure of Mid-line is found out to be of extreme significance to get back lost abdominal wall functions. Component Separation Technique, advocated by Ramirez, achieves midline closure of these wide defects without tension. However, it has lot of wound related morbidity, especially skin necrosis, in about 30 % of cases.

Posterior component separation technique, as described by Carbonell, solved the problem of skin necrosis, but compromised on nerve supply of rectus.

TAR (Transverse Abdominis Release), is a novel technique, described by Yuri Norvitsky, is a promising solution for Large Incisional hernia. It gives back the lost structural & functional integrity back to the abdomen.

We will describe our experience in treatment of Large Incisional Hernia.

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Withdrawal