

One Year Experience with a Non-Bladed Laparoscopic Trocar System

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- Study Objective:** To determine the frequency of complications utilizing a non-bladed trocar system exclusively.
- Design:** Retrospective case analysis.
- Setting:** University teaching hospital
- Patients:** Four hundred and sixty-four consecutive cases from March 2004 through March 2005.
- Intervention:** Placement of the ADAPt (Taut, Inc.) bladeless asymmetrical dilating trocar during 11 commonly performed procedures: diagnostic laparoscopy, tubal ligation, hysterectomy (either total or sub-pericervical), cystectomy, salpingo-oophorectomy, salpingectomy/-ostomy, cancer staging, lysis of adhesions, endometriosis ablation/excision, and myomectomy. A Veress needle/trocar technique was utilized. All fascial defects greater than 10mm were closed.
- Measurements and Main Results:** A total of 1414 ADAPt trocars were placed. Of these, 894 were 5mm, 30 were 8mm, 343 were 10mm, 129 were 12mm, and 18 were 15mm. Trocar insertions were performed by 41 faculty and 28 housestaff (both residents and fellows). Mean age was 39 years (10-81). The average BMI was 27.00 kg/m² (15.49-60.08). The average number of previous abdominal and/or pelvic surgeries was 0.98 (0-8). Complications analyzed were visceral, vascular, or port-site herniations. There was only one intra-operative injury noted: a lateral port site hematoma from injury to the superficial epigastric vessels with placement of a 5mm trocar that was repaired via suture ligation. The patient did not require blood transfusion or hospitalization. There was one post-operative, lateral 12mm port-site herniation despite fascial closure 8 days earlier. This required relief of the incarcerated but not strangulated small bowel with subsequent repair of the fascial defect via laparotomy.
- Conclusion:** The use of the ADAPt (Taut, Inc.) bladeless trocar system yielded a complication rate of 0.0014% (2 out of 1414 trocars placed). Despite a large number of surgeons with varying degrees of expertise and a wide variety of surgical procedures and patient demographics, the ADAPt (Taut, Inc.) bladeless trocar system proved to be a safe and effective laparoscopic access device for use in an academic teaching hospital.

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