

Laparoscopic implantation of distal peritoneal ventriculo-peritoneal shunt catheter a prospective comparative study

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Introduction: Ventriculo-peritoneal shunts (VPS) are a common treatment for hydrocephalus. Placement of the distal abdominal catheter can be difficult in the setting of advanced age, previous shunt or abdominal surgeries, obesity, chronic illnesses etc. at our institute, part of the procedures are performed using a multidisciplinary team of a neurosurgeon and a laparoscopic surgeon. We evaluated the influence on prognosis of a laparoscopically assisted VPS placement using a single-port technique as compared to the conventional mini-laparotomy approach.

Methods: A retrospective review of all patients admitted and operated at our institute for hydrocephalus or shunt dysfunction during 2006-2010 was performed, forming a cohort of 302 patients, 48 with single trocar laparoscopy. Neurosurgeons and laparoscopic surgeons logged the presenting symptoms, past medical history, chronic illnesses and past surgical procedures. Surgical procedure and findings were logged as well. Outcome data was collected at several time points after the surgical intervention.

Results: The laparoscopic patients group was significantly much older, had more chronic illnesses and had significantly more prior abdominal and shunt operations. And still, this group had the same outcome as the open minilaparotomy group, expressed in several independent outcome parameters.

Conclusions: Elderly patients or those suffering less optimally controlled chronic illnesses and obesity, as well as those patients who underwent previous abdominal or shunt operations may benefit from the laparoscopic single port technique for distal catheter placement during VPS procedure. This is shown to reduce the surgical complications and equals the outcome parameters to those of the young, otherwise healthy patients.

Biography

Or Cohen-Inbar has completed his M.D. at the Technion Israel institute of technology, currently completing his Ph.D studies at the field of molecular immunology and cancer immunotherapy. He is a 5th year resident of neurosurgery at the department of neurosurgery at Rambam health care campus. He is a member of both the Congress of neurological surgeons and the EANS, and has published over 6 peer review papers in both clinical and basic science fields.

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