

Introduction

Natural Orifice Transluminal Endoscopic Surgery (NOTES) involves accessing the abdominal cavity via one of the body's natural orifices (mouth, anus, vagina, or urethra). A flexible endoscope is advanced into the peritoneal cavity after puncturing one of the viscera (stomach, colon, vagina, or bladder). Endoscopic insufflation creates a pneumoperitoneum and the appropriate working space. Conventional endoscopic instruments are advanced through the working channels of the endoscope in order to perform the operation. (*Rattner & Kallo, 2006*).

The first endoscopic examination of the abdominal cavity was performed through a posterior vaginal incision, the procedure was termed "Ventroscopy" and thus started the natural orifice access, NOTES first gained notoriety with the initial laboratory report of transgastric peritoneoscopy in 2004 (*Kalloo et al, 2004*).

There are many potential advantages of NOTES over conventional surgery, NOTES may cause less physiologic insult than either laparoscopy or laparotomy. Furthermore, natural orifice surgery may negate the possibility of wound complications and reduce the formation of intra abdominal adhesions. Given portability of NOTES equipments, natural orifice surgery is suited for an intensive care unit. Moreover, NOTES could be performed under conscious sedation, rather than general anesthesia. Lastly are the cosmetic benefits of NOTES (*McGee et al, 2006*).

There are many shortcomings of NOTES in its current state. It has become obvious that current instrumentation is inadequate to perform NOTES. Making the viscerotomy and accessing the abdomen is feasible using standard endoscopic equipment, but beyond those steps, technical advances are imperative for the success of NOTES (*Onders et al, 2007*).

In the future, the portability of NOTES equipment is ideal for performing transgastric surgery in intensive care unit, transgastric abdominal exploration for compromised bowel in suspected cases of mesenteric ischemia. Detecting necrosis of the entire small bowel would obviate a trip to the operating room for a non therapeutic laparotomy. Findings of limited ischemia or necrosis would serve to select those patients who might benefit from a laparotomy (*Onders et al, 2007*).

Aim of the work

The aim of the work is to revise the current status of the natural orifice transluminal endoscopic surgery (NOTES) and its future prospective.