

UROLOGIC COMPLICATIONS AFTER ROBOTIC GYNAECOLOGIC SURGERIES: EXPERIENCE AT A TERTIARY CARE FACILITY

Hypothesis / aims of study

Urologic complications after gynaecologic surgery is not uncommon even with expert hands. Since gaining the U.S. Food and Drug Administration approval in 2005, the da Vinci robot (Intuitive Surgical, Inc., Sunnyvale, CA) has become the forerunner for use of gynaecologic surgery as a modification of the laparoscopic approach. The robotic arms have a better control over robot-specific laparoscopic instruments that have seven degrees of freedom. This advantage definitely improves surgeon's dexterity. In this study, we report our own experience with different urologic complications following robotic gynaecologic surgery.

Study design, materials and methods

After the Institutional Review Board approval, we reviewed the charts of all patients who presented to our urology clinic or the emergency room with urologic complications after gynaecologic procedure between February 2009 and March 2010. Patients' demographics, type of urologic complications, type and indication for gynaecologic procedures, time of presentation after gynaecologic surgery and treatment offered for those patients were also recorded.

Results

The charts of 11 patients who had urologic complications were reviewed. Patient ages ranged between 34 and 55 (median 42) years. Eight patients (72%) had da Vinci and three had open gynaecologic procedures. In the robotic group, three had malignant and five had benign gynaecologic disease. There were two Vesicovaginal Fistulas (VVF), five Ureterovaginal Fistulas (UVFs) and one combined VVF and UVF in this group (figures 1-3). The three patients who had open gynaecological procedure, had malignant (one) and benign (two) gynaecologic conditions. Those patients developed VVFs. All patients presented during the early post-operative period with a time range between 2 and 7 (average 3) days. The robotic gynaecologic procedures were performed by four different surgeons from two different facilities. All patients had urologic reconstructive surgeries (VVF repair and/or ureteroneocystotomy) except for two patients who had successful JJ stent insertions for UVFs.

Interpretation of results

In this study, 8 out of 11 patients (72%) had their urologic complications after da Vinci gynaecologic procedures. This high rate could be because of the increased incidence of robotic surgeries, learning curve and/or overconfidence when dealing with the robot. These complications occurred between different levels of experiences which might exclude surgeons' experience as a factor.

Concluding message

The da Vinci robot is being increasingly utilized in surgical procedures including gynaecologic ones. Even with this high technology, extreme caution should be provided with proper knowledge of the laparoscopic anatomy. We also suggest stressing importance of attaining certain level of training before pursuing these procedures.

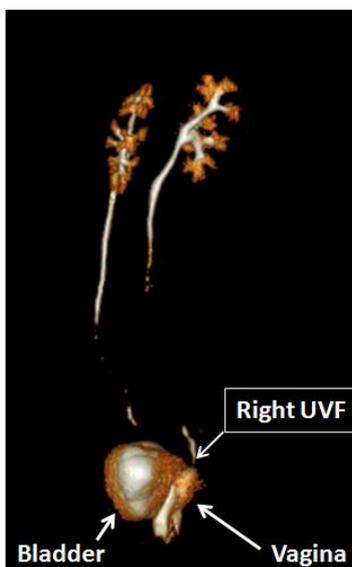


Figure-1: Three dimensional CT shows Right UVF



Figure-2: CT with contrast shows VVF

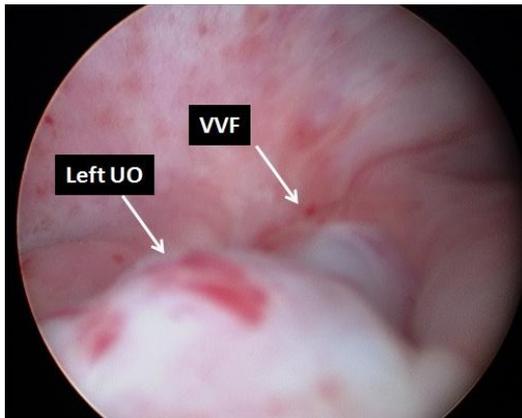


Figure-3: Cystourethroscopy shows large VVF close to the left Ureteral Orifice (UO)

Specify source of funding or grant	None
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	Yes
Specify Name of Ethics Committee	Institutional Review Board
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No