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# THE INCIDENCE OF VAULT HAEMATOMA AFTER VAGINAL HYSTERECTOMY AND CONCOMITANT PELVIC FLOOR SURGERY

Hypothesis / aims of study

Ultrasound detection of vault haematoma following vaginal hysterectomy is a common finding and is associated with increased post-operative morbidity, such as febrile episodes, blood transfusion, infection, longer hospitalisation and higher re-admission rate compared to those without haematoma.

It was previously shown that vaginal ultrasound examination should not be performed routinely after hysterectomy; however the incidence of vault haematoma after various types of pelvic surgery is not well established. No study has been done in our tertiary hospital to assess the incidence of vault haematoma after vaginal hysterectomy and concomitant pelvic floor surgery and its relation to post-operative co-morbidity.

The aim of our study is to:

1) Compare the incidence of vault haematoma after vaginal hysterectomy and concomitant pelvic floor surgery between group A and group B

2) Establish any association of vault haematoma with post-operative co-morbidity following pelvic floor surgery

Study design, materials and methods

A prospective observational cross sectional study of women who underwent vaginal hysterectomy and concomitant pelvic floor surgery for pelvic organ prolapse at a tertiary hospital in Singapore was carried out over 6 months from November 2014 to June 2015. Medical records of subjects were traced and comparison was done between Group A (n=37) who underwent surgery by one consultant urogynaecologist and Group B (n=70) who underwent surgery under supervision by one trained registrar.

All women received a single dose of intravenous cefazolin 2g within 30 minutes of initiation of surgery. Vaginal hysterectomy and concomitant pelvic floor surgery performed was led by the same surgical team done by a consultant urogynaecologist, or under supervision of one trained urogynecology registrar. Surgical technique for vaginal hysterectomy and colporrhaphy was standardized. The vaginal vault was closed and not reperitonealised. Intra-operative details including duration, blood loss, units of blood transfused were recorded for all patients. Post operatively; patients were assessed for complications such as febrile episodes, drop in haemoglobin, need for blood transfusions, length of hospitalisation, failed trial off catheter and urinary tract infections.

All women had trans-vaginal ultrasound examination by an independent radiologist on the fifth to seventh post-operative day. Clinical assessments were made by established management protocol, by staff blinded to the ultrasound findings. Statistical analysis of patients with and without vault haematoma was compared using chi-square test and the Mann-Whitney U test was performed with SPSS V 16.0.

Results

A prospective review of 107 patients was carried out. The mean age was 62 years old. Majority (87%) are postmenopausal. 36/107 (33.6%) had post-operative vault haematoma, of which 25/36 (69.4%) of haematomas were < 5 cm and 11/36 (30.6%) were > 5 cm. Large majority (75%) of those with haematoma consists of patients from group B. Baseline characteristics of both groups were similar except mean age. Group A patients were younger age group compared group B, with mean age 54.9 years and 64.6 years respectively (p=0.035).

There were no intraoperative complications in either group. There was no statistical difference in intraoperative blood loss, or drop in haemoglobin. Group B underwent longer mean operating time (107.4 minutes) compared to group A (70.8 minutes), which achieves a statistical significance (p<0.001).

No statistical difference identified for post-operative complications in patients with vault haematoma, including blood transfusion, febrile morbidity, urinary tract infection, duration to successful trial off catheter, and duration of hospitalization.

Interpretation of results

The incidence of post-operative vault haematoma in our local hospital is 34 % which was hitherto not been studied before. Majority (69.4%) of haematoma were small < 5 cm. Patients with post-operative vault haematoma is associated with a statistically significant longer mean operating duration time in surgery supervised by registrar, compared with performed by one consultant urogynaecologist. However, there were no statistical difference in intraoperative complications, estimated blood loss, post-operative drop in haemoglobin and post-operative morbidity when compared between these groups.

Concluding message

We observed that adequate training and supervision ensure safe surgery for patients and minimizes surgical morbidity and mortality. We suggest that patients with post-operative vault haematoma should be followed up for haemoglobin status and further imaging studies should be performed to assess progression following conservative treatment, eg repeat ultrasonography during follow up.

Disclosures
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