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ORIGINAL ARTICLES

Short-term morbidity following vaginal prolapse surgery: what the surgeon does not see

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Abstract The aim of this study was to estimate the incidence of minor complications after pelvic floor surgery as well as service utilisation for these complaints. One hundred consecutive women were asked about any troublesome symptoms following pelvic floor surgery. Sixty-six percent of women reported a troublesome complaint in the post-operative period. The most common symptom was vaginal discharge. Forty-four percent of this cohort sought the advice of a medical practitioner. These findings are important since patients may wish to know about the more common but fairly troublesome minor complaints found in this study. They also have implications for resource use following surgery.

Keywords Prolapse · Surgery · Complications · Infection

Introduction

Uterovaginal prolapse is estimated to affect 50% of parous women, of whom 20% will be symptomatic [1]. Eleven percent of women will have had an operation for pelvic organ prolapse (POP) by the age of 70 [2]. An epidemiological study from the USA estimated the rate of surgery for POP to be 22.7 per 10,000 women [3]. The same study found the rate of complications following surgery to be 15.5%, with bleeding and infection accounting for the majority. Whilst reviewing our own patients, we were aware that many experienced vaginal discharge post-operatively. They were often treated by general practitioners or other health care professionals. Most did not offer information regarding these symptoms, as these had been successfully treated and were no longer an ongoing complaint.

There have been few studies looking at minor complaints after pelvic floor surgery. Given the high frequency with which such procedures are performed, it is important to be able to counsel patients regarding the risk of minor but bothersome symptoms such as vaginal discharge or bleeding post-operatively. The aim of this study was therefore to estimate the incidence of minor complaints after pelvic floor surgery as well as service utilisation for these complications.

Patients and methods

This was a prospective observational study. The study population consisted of 100 consecutive women who underwent vaginal surgery for POP between September 2008 and June 2009. Each patient had been assessed with a full urogynaecological history and examination. Prolapse was assessed with the patient in the left lateral position during a Valsalva manoeuvre and staged using the Baden Walker halfway system. Patients with a history suggestive of prolapse (such as ‘something coming down’, a lump in the vagina, vaginal discomfort), together with prolapse of at least grade 2, were offered surgical intervention. Patients with vaginal atrophy were treated with topical oestrogen pre-operatively. Patients were given written information regarding their recovery. This advised that some discharge was normal but they should see their general practitioner (GP) if the discharge became ‘smelly’. The symptoms of a urinary tract infection were described with similar advice to see the GP. Women with pelvic organ prolapse of grade 2 or above who had undergone vaginal surgery were eligible for

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inclusion into this study. Exclusion criteria were concomitant abdominal surgical procedures.

Women complaining of concurrent urinary symptoms were investigated further with twin-channel subtraction cystometry, and those with urodynamic stress incontinence underwent a tension-free vaginal tape (TVT) together with the prolapse procedure.

Patients underwent vaginal repair of each prolapsed compartment, including vaginal hysterectomy/vault suspension, if there was apical prolapse. Procedures were carried out under regional or general anaesthesia. Co-amoxiclav (amoxicillin 1 g and clavulanic 200 mg) was given as a single intravenous dose during induction of anaesthesia. Cefuroxime and metronidazole were administered in the same fashion to women allergic to penicillin. Patients were discharged home on day 3 or 4, after successfully voiding. Polyglycolic acid 1/0 sutures were used for all women. Continuous locking sutures were used for vaginal closure supported by fascial plication.

Follow-up took place at 8 weeks post-operatively and included a repeat prolapse assessment, together with enquiry regarding minor post-operative complications such as offensive discharge, urinary tract infections, vaginal pain and any treatment received for these. If a patient complained of more than one symptom, these were categorised separately. Demographic data, together with details of the operation performed on each patient, were also gathered at this stage. The presence and nature of minor post-operative symptoms, whether medical attention had been sought, what treatment had been offered, the type of surgical procedure each patient had had and demographic details were entered into a database and analysed using descriptive statistics. Formal ethical assessment was not required since this was a non-interventional audit of patient data.

The primary outcome measure for this study was the incidence and nature of 'bothersome' symptoms, as detailed above, in the post-operative period.

Results

The mean age was 59.3 years (range 26–85). Moreover, 64/100 (64.0%) were post-menopausal. The types and numbers of procedures performed are shown in Table 1. Overall, 34/100 women (34%) complained of no problems in the post-operative period. Of the remaining women, 48/66 complained of offensive discharge, 18/66 complained of vaginal bleeding, 22/66 complained of vaginal or abdominal pain and 4/66 complained of dysuria with a urinary tract infection (UTI) confirmed on urine culture or had been treated for a UTI during the post-operative period. Of the 48 women who experienced offensive vaginal discharge, 29 had been seen by their GP during the immediate post-operative period, and 28 of these had been given oral antibiotics. Fifteen had been seen in the Emergency Gynaecology Clinic at the hospital, and 11 of these were given oral antibiotics. Two of the 66 women with troublesome post-operative symptoms were admitted. One of these presented with fatigue and was found to have low haemoglobin and was given a blood transfusion. Overall, 44 of the whole cohort (44/100) or 44% sought the advice of a medical practitioner during the post-operative period.

Discussion

This audit has shown the incidence of minor complications during the post-operative period to be 66%. The most common symptom experienced by patients is offensive vaginal discharge, with vaginal pain being the next most common. Over four in ten women sought medical attention prior to their scheduled follow-up appointment. Women with vaginal discharge who sought the advice of their GP were almost all offered oral antibiotics.

There has been very little quantification of the incidence of vaginal infection following pelvic floor surgery. One study detailing peri-operative complications in patients undergoing prolapse repair with or without a concurrent continence procedure reported the incidence of infection to be 2.5% for prolapse repair only and 3.7% for prolapse and continence surgery [4]. This study did not however detail the type of infection, e.g. vaginal, urinary tract, and thus comparisons with our data are difficult. A recent study of infections after prolapse surgery reported an overall incidence of one in seven for post-operative infections—this was based on positive swabs rather than on the occurrence of patient-defined troublesome symptoms [5]. The same study reported a 32% incidence for vaginal

Table 1 Numbers and types of procedures undertaken in cohort

Anterior and posterior repairs	60
Vaginal hysterectomy, anterior and posterior repairs	18
Vaginal hysterectomy, anterior and posterior repairs and tension-free vaginal tape (TVT)	8
Anterior and posterior repairs, TVT	5
Anterior repair, posterior intravaginal slingplasty (IVS)	3
Manchester repair, anterior and posterior repairs	3
Posterior repair	3

discharge, which is lower than found in our population; additionally, no distinction is made between offensive and non-offensive discharge in this study. More work exists on the incidence of infection after mesh-augmented pelvic floor repair. The incidence of mesh-related infection has been reported to be between 0% and 8% [6]. All of these figures are clearly far lower than the incidence of offensive discharge that we have identified in this cohort. This may be because the studies mentioned have only included infections confirmed in microbiological testing or have ignored vaginal discharge in the initial post-operative period. It is interesting to note that most of the women with discharge did seek medical attention for this symptom, and that most were treated with antibiotics without waiting for the results of any swabs. This does indicate a perception amongst both women and medical practitioners that any offensive discharge following vaginal surgery does indicate a pathological process rather than normal healing.

Various factors may influence the development of local infection following pelvic floor surgery. Patient age, associated medical problems and the type of peri-operative preventative measures taken will influence the development of local infection. If mesh is used, the type of mesh, the route of placement and tension in the mesh may have an impact on the development of infection.

There are limitations to this data. This was a heterogeneous group and the numbers were not high enough to draw any meaningful comparison between women undergoing different types and combinations of pelvic floor surgery. All of the patients in the cohort underwent multi-compartmental surgery; it is difficult to avoid this since the majority of women present with multi-compartmental disease. The lack of a control or comparator group makes any conclusions difficult to verify. Some may take issue with our definitions of minor complaints, for example the inclusion of vaginal pain. We included all symptoms that women found sufficiently troublesome to either seek medical attention for or to mention at the follow-up appointment. In this way, these complaints were 'patient defined'. It can be argued that these are at least as important as those defined or verified by researchers or clinicians, as these are the problems perceived to be troublesome by patients.

The reason for the high incidence of minor complaints is unclear but is consistent with our previous conceptions. Polyglycolic acid sutures may not be the ideal suture material for prolapse surgery. The multifilament nature may encourage colonisation by normal vaginal flora with the moist warm nature of the vagina acting as a perfect culture medium for infection. The large calibre of the suture material used provides support for the repair to allow remodelling of the patients' tissues but this material may take longer to dissolve. Monofilament suture materials may be less prone to colonisation and the production of discharge.

Reduced use of resources could be achieved by advising women that offensive vaginal discharge is a normal part of the operation recovery and does not need treatment. The risk with this approach is that a major infection may be missed resulting in significant harm to the patient. To reduce the use of health resources, women could be given a course of antibiotics and advised to take them if they develop offensive vaginal discharge. This approach might result in the unnecessary use of antibiotics. A peri-operative course of three doses of antibiotics might be more appropriate than the single dose of prophylactic antibiotics used in this series. However, most women presented more than 2 weeks after surgery and it seems unlikely that previous antibiotics would alter the outcome at this stage. The above issues could be tested in a randomised controlled trial comparing different suture materials and methods of treating offensive discharge.

In this study, we have found the incidence of minor complaints following vaginal surgery for POP to be substantially higher than the overall incidence of complications as reported in the literature. This is of some importance since these more minor complaints still lead to not insignificant resource utilisation in terms of medical consultations and antibiotic prescribing. The presence of these symptoms can easily be overlooked without detailed questioning. These findings are also of importance in terms of their potential for use in the consenting and operative counselling process, since patients may wish to know not only about major complications but also the more common, but fairly troublesome, minor complaints found in this study.

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JD—design, data collection, writing of manuscript, overall supervision

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