

UTILITY OF THE VAGINAL PRESSURE PROFILE PRE AND POST SURGERY FOR PELVIC ORGAN PROLAPSE: A PILOT STUDY

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Fifty percent of women over the age of 50 years have reported symptoms of pelvic organ prolapse (POP), and a 11% lifetime risk of having surgery (1). There is a naturally occurring pressure differential along the length of the vagina, giving rise to a pressure profile (2). In women without POP, this profile is quite distinct (3). The aim of surgery is to correct anatomical displacement of the pelvic organ(s). The goal of this pilot study was to determine if a pressure sensor array, femfit® (Fig 1), can measure differences in pressure profiles pre and post-surgery.

Methods:

This was a prospective observational study of women scheduled for POP surgical repair. Women attending gynaecological clinics were invited to participate. Vaginal pressure profile measurements with the femfit® were conducted pre and post-surgery. The femfit® was cleaned and covered with a sheath prior to insertion by the clinician. Measurements were collected supine and standing during maximal pelvic floor muscle (PFM) contractions, and cough.

Results:

Nineteen women completed the study, with 16 sets of data available for analysis. None had prior PFM training. Mean age 62.6 years (range 38 to 75) BMI (24.4±1.85) kgm², median parity 2 (range 1 to 3). Surgeries included anterior and posterior colporrhaphy, with or without sacrospinous fixation. Peak PFM contraction pressures were identified from the pressure trace, while all other sensor measurements provided a pressure profile. The most distal sensor measured intra-abdominal pressure (IAP). On average, the difference between PFM pressure and IAP was significantly greater post-surgery (p<0.01) Table 1

Conclusion:

These results suggest that women can generate higher PFM pressures compared to IAP post-surgery, and are comparable to women without POP. This metric might be useful to assess surgical success and encourage women to maintain this profile via PFM training, potentially reducing the risk of POP recurrence.

References

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