Sacrocolpopexy with Burch colposuspension in pelvic organ prolapse

A 7-year follow-up of a randomised controlled trial suggests that failure of sacrocolpopexy increases at a similar rate in women with or without a concurrent Burch colposuspension, but colposuspension appears to prevent stress incontinence for longer. There may be long-term risks of mesh erosion.

**Overview:** Pelvic organ prolapse (POP) is protrusion of one or more of the pelvic organs into the vagina. This condition includes vaginal vault prolapse, in which the uppermost part of the vagina descends from its normal position, sometimes out through the vaginal opening. POP can affect quality of life by causing symptoms of pressure and discomfort and by affecting urinary, bowel and sexual function. Current treatment options are pelvic floor muscle training, use of pessaries, and surgery.

One of the surgical treatments available is sacrocolpopexy, in which the apex of the vagina is attached to the anterior longitudinal ligament of the sacrum or the sacral promontory using a synthetic or non-synthetic graft. Stress urinary incontinence (SUI) may accompany POP or may develop after surgery to treat it. Burch colposuspension (also known as retropubic urethropexy) is a procedure that can be done at the same time as sacrocolpopexy to treat or prevent SUI. In this surgery the urethra is supported by suturing the vagina to nearby ligaments.

**Current advice:** The NICE interventional procedure guidance on sacrocolpopexy using mesh for vaginal vault prolapse repair states that current evidence on the safety and efficacy of the procedure appears adequate to support its use provided that normal arrangements are in place for clinical governance and audit. The guidance additionally notes that evidence on safety and efficacy outcomes is limited to 5 years and that evidence on outcomes beyond 5 years would be useful.

**New evidence:** Nygaard et al. (2013) performed a 7-year follow-up of the randomised Colpopexy and Urinary Reduction Efforts (CARE) trial. In the original trial, 322 women were randomised to sacrocolpopexy with or without simultaneous Burch colposuspension. Patients with no preoperative symptoms of SUI and stage II, III, or IV prolapse measured on the POP quantification system were included. Patients and research staff were blinded to treatments for a minimum of 3 months.

In the present follow-up study, 215 of the original participants were assessed for up to 7 years after the initial surgery. The primary aims were to compare long-term outcomes for POP and SUI surgery. Failure of POP treatment was based on anatomical and symptom criteria and failure of SUI treatment was based on symptoms. In both groups, rates of POP and SUI failure gradually increased during the 7 years of follow-up. Probability of POP treatment failure in women who had sacrocolpopexy with Burch colposuspension increased from 0.22 at 2 years to 0.48 at 7 years. In those who had no colposuspension, the corresponding increase in probability was 0.18 to 0.34. Difference in probability of POP failure between groups at 7 years was not significant (0.13, 95% confidence interval [CI] –0.10 to 0.32). For SUI, probability of failure in patients with colposuspension was 0.44 at 2 years and 0.62 at 7 years. Without colposuspension, the corresponding increase in probability was 0.61 to 0.77. The
probability of SUI failure at 7 years was significantly lower in the colposuspension group (−0.15, 95% CI −0.27 to −0.03).

Among all women, by 7 years there had been 4 cases of suture erosion and 23 cases of mesh erosion; erosions occurred with all types of mesh. The probability of mesh erosion at 7 years (estimated by Kaplan-Meier curve) was 10.5% (95% CI 6.8% to 16.1%).

**Commentary:** “This is a well-designed study with appropriate randomisation of patients to sacrocolpopexy with or without concurrent Burch colposuspension. This new evidence gives us a little more insight into the long-term outcomes of sacrocolpopexy surgery. Up until now we have had only 5 year follow-up data, which are referenced in the NICE interventional procedure guidance. This new study provides some data on outcomes at 7 years, although only 59% of the population was studied at this point; therefore, the additional evidence is limited.

“Long-term data are already available for Burch colposuspension (Alcalay et al. 1996), so the current study adds nothing new on the safety and efficacy of Burch colposuspension, only on sacrocolpopexy. The other point of note is the high mesh erosion rate of 10.5% at 7 years. This finding may be relevant for patient counselling before surgery, because some of these mesh erosions are quite challenging to deal with clinically.

“Therefore this new research may add a little information to the existing body of literature on POP and SUI treatment but will not substantially change practice in the UK. It is unlikely that any cost savings or efficiencies would be realised by implementing this new evidence.” – Ash Monga, Consultant Gynaecologist, Subspecialist Urogynaecologist, University Hospitals Southampton

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