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Title (type in  
CAPITAL  
LETTERS)**MINI LAPAROTOMY BURCH COLPOSUSPENSION**Aims of Study

The Burch Colposuspension is at present generally accepted as the most effective surgical procedure for genuine stress incontinence. The operation has traditionally been performed through a standard Pfannenstiel incision, often with the use of ring retractors and considerable tissue dissection. (1-4) High elevation of the paraurethral endopelvic fascia to the iliopectineal ligament, suprapubic catheterisation until residual urines fall below a predetermined amount, and narcotic analgesia all contribute to a prolonged hospital stay. Many authors have reported shorter lengths of stay with laparoscopic colposuspensions, with less tissue trauma and post-operative pain, but often with longer operating times and a considerable 'learning curve' for the procedure. (5-9) Theatre equipment costs are also higher. (10) We report a modified approach to open colposuspension, which can be adopted by all who are experienced with the traditional operation, which results in no increased operative costs, and a reduced hospital stay. The modification involves the pre-operative preparation of the patient to expect to go home in 1-3 days. A small suprapubic skin incision of 2-3 inches is made, with minimal tissue dissection through the rectus muscles to reach the Cave of Retzius. Small skin retractors display the operative field. A standard Burch Colposuspension is then performed. The bladder neck, identified by the balloon of a urethral catheter, is deflected medially, and a vaginal finger pushes the paraurethral endopelvic fascia and vagina up towards the iliopectineal ligament. Two sutures of No.1 ethibond are used to suspend the paraurethral fascia from the iliopectineal ligament, to comfortably support the urethra without over elevation. Descent of the urethra with increases in intra-abdominal pressure is thus prevented. A Bonnano suprapubic catheter is inserted, and careful closure with Vicryl and subcutaneous prolene achieved. The operation site is infiltrated with 20 mls of 1:200,000 adrenaline in 0.5% Marcaine in to reduce post operative analgesic requirements. Diclofenac suppositories are used post-operatively, avoiding the use of opiate analgesia. The Bonnano catheter is spiggoted the next morning at 7 am. The patient is encouraged to mobilise and void. When spontaneous voiding achieves a volume of over 150 mls (with a residual of no more than 300 mls) the suprapubic is removed, and the patient allowed home. A post micturition bladder ultrasound is performed 2-5 days later, to ensure a residual urine below 50 mls.

Methods

The records of the preceding 17 patients on whom a standard Burch Colposuspension had been performed were compared with the first 15 patients using the modifications outlined above. Patients admitted for Burch Colposuspension with a diagnosis of pure 'Genuine Stress Incontinence', proven with urodynamic evaluation, were informed of the modified approach, and the expectation that they would be allowed home, spontaneously voiding, after 24-48 hrs. The two groups were compared with regard to (a) time from operation to catheter clamping (b) time to first void (c) time to catheter removal and (d) time to discharge from hospital.

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**Results**

	Control group (n=17)	Study group (n=15)
Mean time to catheter clamping	43 hrs	24 hrs
Mean time to first void	7 hrs (50 hrs post-op)	5 hrs (29hrs post-op)
Mean time clamping to removal	59 hrs (102 hrs post-op)	28 hrs (52 hrs post-op)
Mean time to discharge	123 hrs	78 hrs
Patients discharged by day 2	0	3/15 (20%)
patients discharged by day 3	1/17 (2%)	9/15 (60%)
patients discharged by day 4	9/17 (52%)	13/15 (87%)

Mean operating time for the modified procedure was 31 minutes. No new equipment was required, and the suture placement was identical to those used in the standard Burch Colposuspension. In our unit the standard operation had previously been shown to have a 90% subjective success rate at follow-up (range 1-5 years). There is no reason to expect the further modifications outlined above would reduce the efficacy of the procedure. The more delicate operative procedure, with local anaesthetic infiltration of the wound, diclofenac, early mobilisation and catheter clamping, with catheter removal as soon as retention was excluded, irrespective of the initial residual, led to an earlier discharge from hospital. Only one patient had an ultrasound bladder residual of >50 mls at 6 days (100 mls), which was <50mls at 8 days without treatment.

**Conclusion**

The standard Burch colposuspension operation, with a Pfannenstiel incision, retraction, narcotic analgesia, delayed catheter clamping and catheter removal only with low residuals is a major surgical procedure to insert 4 paraurethral sutures. The modifications outlined in this small study can be adopted by all, with no additional operating time, no additional theatre equipment, no surgical learning curve and an immediate reduction in length of stay. Patient preparation for a quick recovery, and minimal postoperative pain due to the marcaine local anaesthesia are an essential element of the mini-laparotomy Colposuspension's success.

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