

The Outcome of Burch Colposuspension – An Audit

Tameside & Glossop Integrated Care NHS Foundation Trust, Manchester, United Kingdom

Dr Fariha Altaf¹

Dr Biza Akbar²

Dr Lenzi Hanna³

Dr Su Htwe⁴

Historical Background

- John Christopher Burch was a professor at Vanderbilt University Medical School from 1944 until 1965.
- His colposuspension procedure was the result of a frustrating attempt to dissect sufficient periosteum in an elderly woman in whom he was trying to perform an MMK procedure.
- Burch improvised and finally performed an attachment at the level of the Cooper ligament.
- His original description referred to the operation as a combined incontinence and prolapse repair. The Burch colposuspension has a long-term success rate in restoring continence of 65-90% over 1-10 years. Over time, Burch colposuspension has been adapted for laparoscopy. (3) (4)

Introduction

- Stress incontinence (SUI) causes a significant physical and psychological burden on women.(1)(2)
- Owing to recent concerns about synthetic mesh ,the place of colposuspension in clinical practice depends on the data available describing long-term cure results. The concern is that a number of patients, develop recurrent urinary incontinence after the colposuspension, or other disabling conditions, such as genital prolapse or voiding difficulties.

Objective

- This audit aimed to study short-term and long-term outcomes of open Burch colposuspension at Tameside General Hospital(TGH), and study the subjective and objective impression of cure in our cases of Burch colposuspension.



Professor John Christopher Burch

Study Design

- A retrospective audit was conducted at Tameside General Hospital(TGH) for women with urodynamic stress incontinence (without intrinsic sphincter deficiency) who underwent surgery for stress urinary incontinence.

Methods

- Women included were those who had open Burch colposuspension from January 2019 to Feb 2020, at TGH. Follow-up was by questionnaires and one- time physical or telephone consultation until 5 feb 2023, using a dedicated database.
- Primary outcomes were the presence or absence of stress urinary incontinence on follow-up, the success of index surgery based on response to validated questionnaires of patient-reported outcomes,(Graph:1) and retreatment rates. The patient's characteristics, operative data and outcome were reviewed. All the data was compiled and analysed on Microsoft Excel 2010®.

Open Burch Technique

- A Foley catheter is inserted into the bladder to decompress it and aid in identification of the bladder neck.
- The incision is either a Pfannenstiel or lower midline abdominal incision to access the retropubic space of Retzius.
- During the initial dissection, the peritoneal reflection is swept of the bladder.
- The retropubic space is dissected and the bladder neck, anterior vaginal wall, and urethra are exposed.
- The bladder neck is identified with palpation of the Foley catheter bulb.The pubocervical fascia may be identified by clearing the periurethral space of overlying fat. To assist in identifying the anterior vaginal wall, an assistant can place a gloved examining finger in the vagina to tent the vagina anteriorly.
- Two to 4 sutures are placed on each side, taking a good bite of overlying fascia and anterior vaginal wall. The most distal suture is placed at the level of the bladder neck and about 2 cm lateral to it, The sutures are placed into corresponding sites in Cooper's ligament, as shown below.
- Care must be taken to leave a “suture bridge,” whereby the sutures are not on excessive tension. (4)

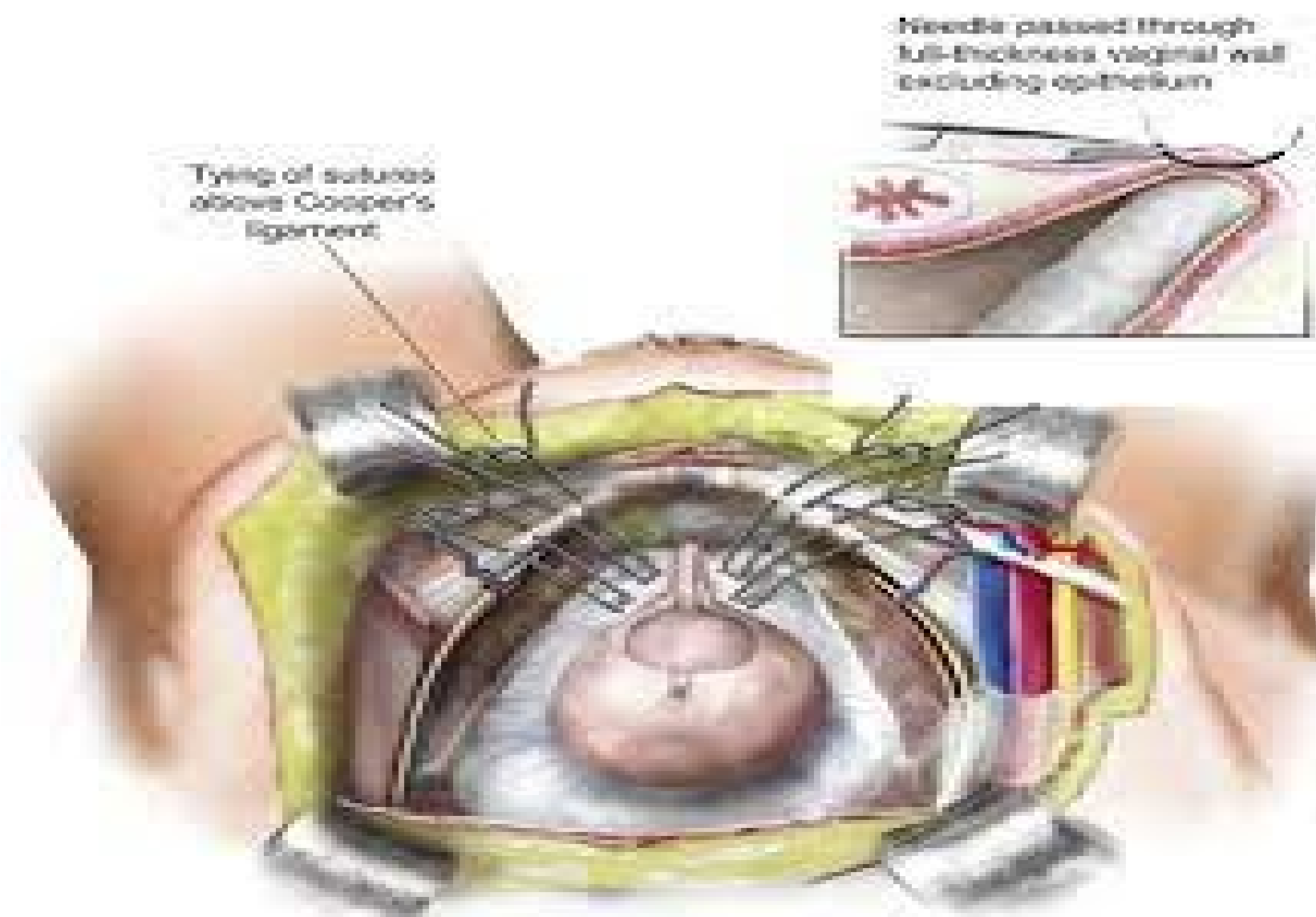
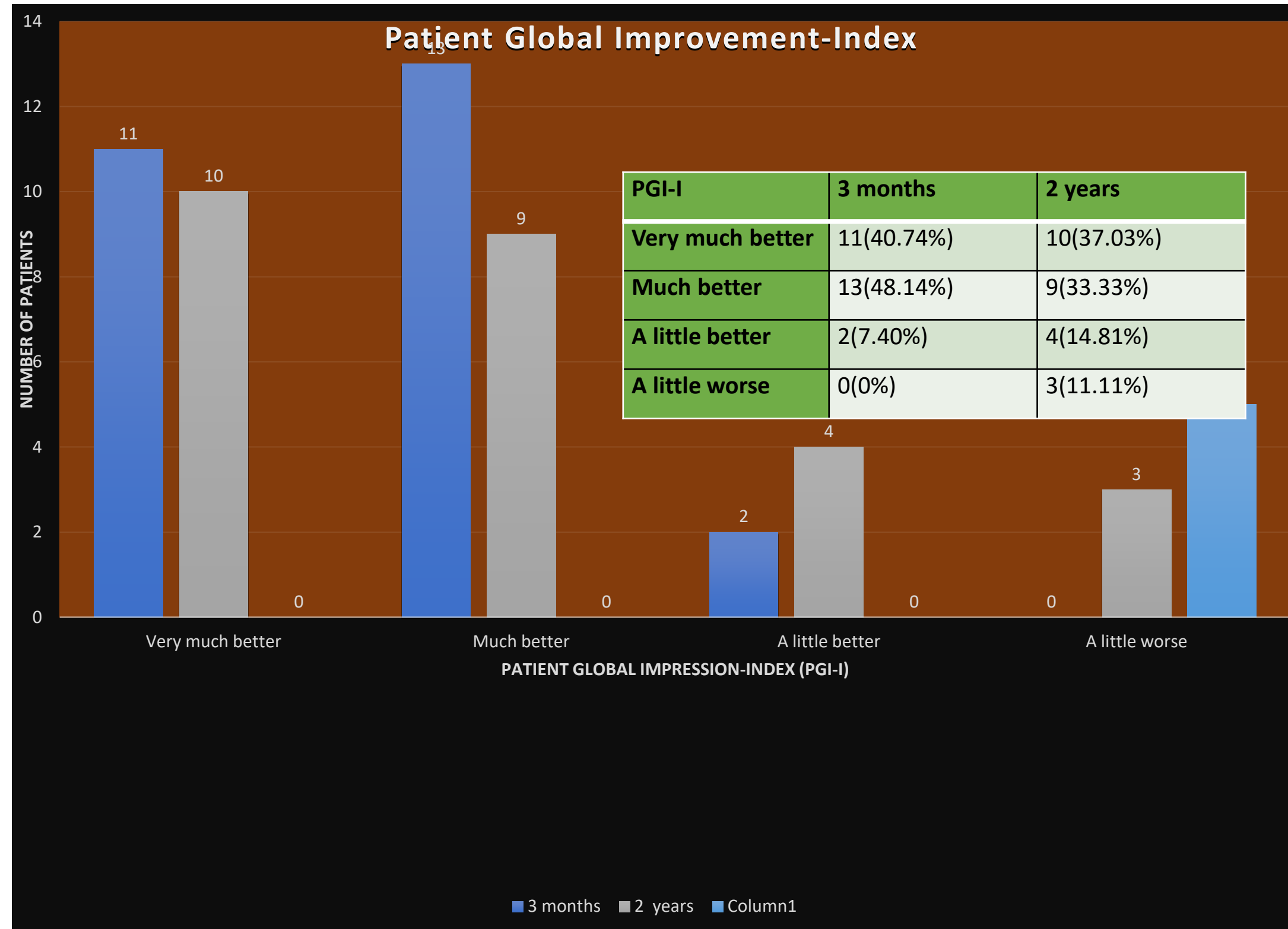


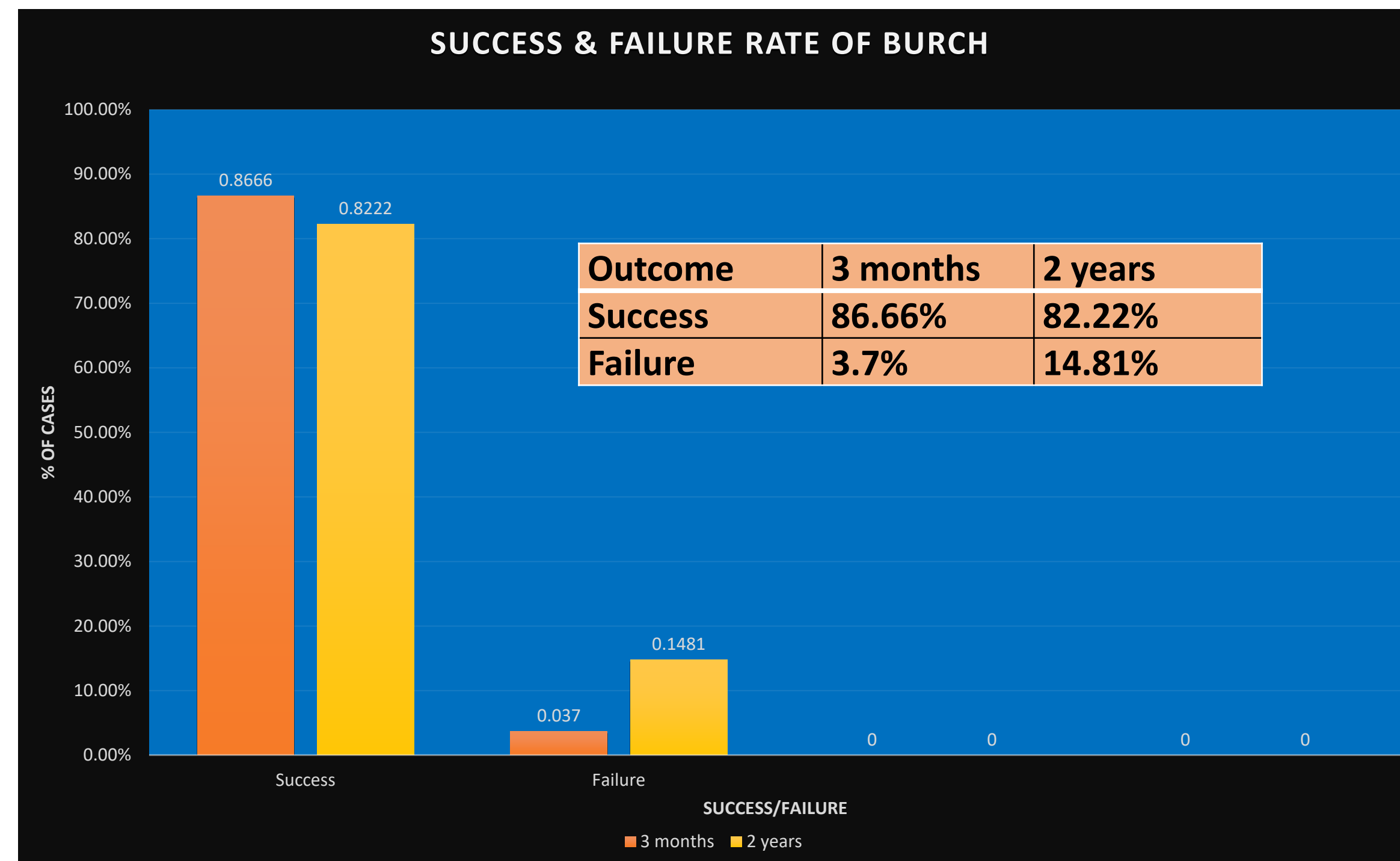
Fig. 1. Burch colposuspension suture placement. (Atlas of pelvic anatomy and gynecology surgery. 3rd edition)

Results

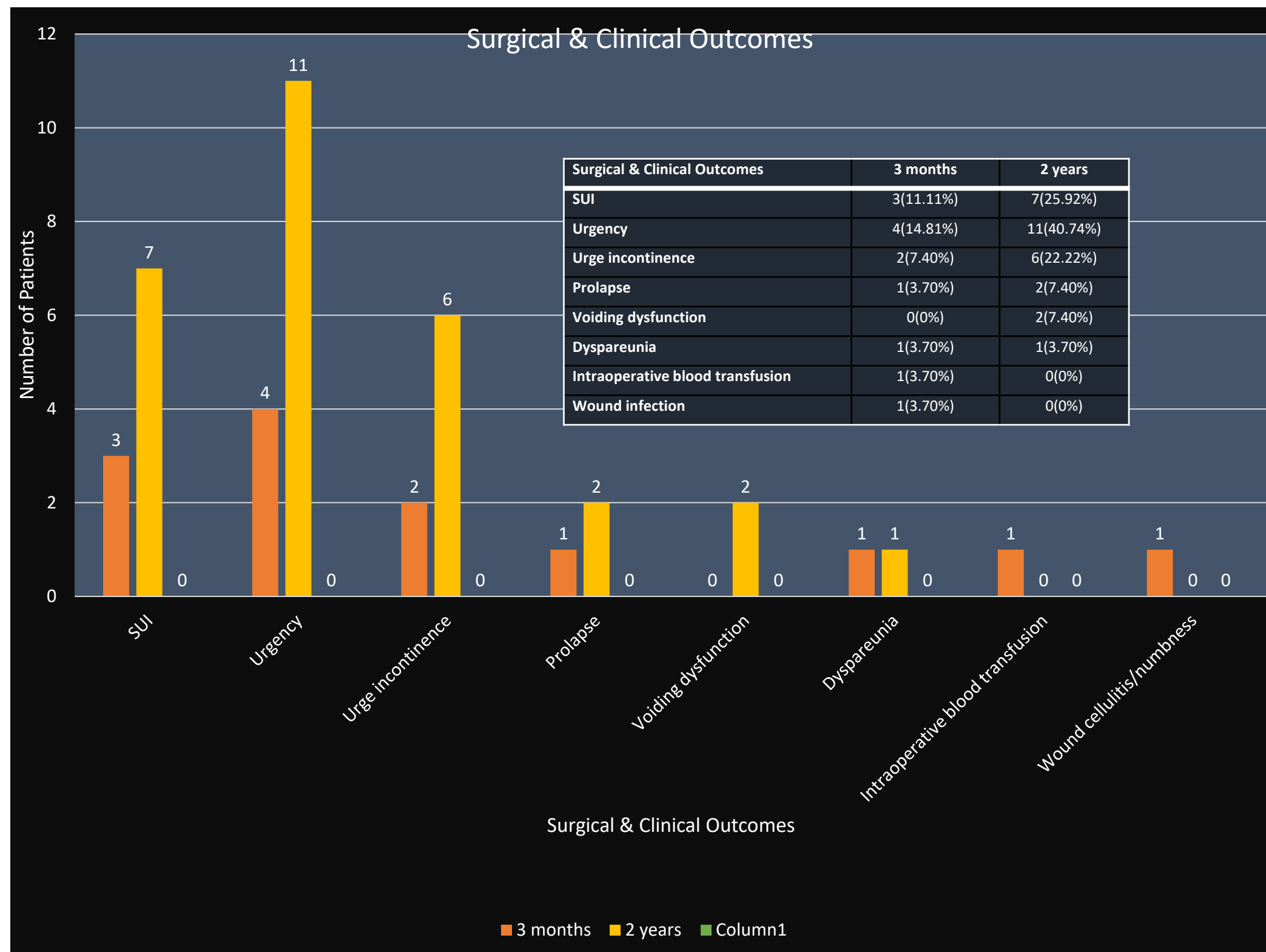
- The study included 27 women who had Burch Colposuspension at TGH. Mean follow-up was 3 months and 2 years after the surgery. (Graph:2)
- The average age was 53.59years.
- Overall, 88.88% and 74.07% of patients reported no ongoing SUI at the time of the follow-up at 3 months and 2 years respectively.
- No significant outcomes were observed for voiding dysfunction.
- Trends were shown towards a lower perioperative complication rate. Postoperative mild urgency was observed in 14.81% at 3 months and 40.74% at 2 years.
- Urge incontinence in 7.40% at 3 months and 22.22% at 2 years,which was treated with anti-cholinergics.
- One failure (3.7%) was reported at 3 months. At 2 years failure was noted in 14.81%.
- One patient reported dyspareunia. Prolapse symptoms were reported in one patient in short term and 7.40% in the long term.Two patients reported short term pain and numbness at the operative site across the study group. One patient had superficial wound infection and was treated by antibiotics. (Graph: 3)



GRAPH 1: PGI-I SCORE



GRAPH 2: SUCCESS/FAILURE RATE



GRAPH 3: OUTCOMES OF THE SURGERY

Conclusion

- This study showed patient satisfaction, after Burch Colpo suspension and no complications. Reoperation rates for incontinence were low. Our study indicated that Burch Colpo suspension is an effective procedure for SUI, and the cure effect was maintained for the 2-year follow-up period, with relatively low complication rates. Burch (BC) should be considered a surgical option for SUI. Long term studies are required to establish efficacy over 5-10 year period.

References

- 1.Anne-Charlotte Kinn (1995) Burch Colposuspension for Stress Urinary Incontinence, Scandinavian Journal of and Nephrology, 29:4, 449-455.
- 2.Ascioglu, O., Gungorduk, K., Besimoglu, B., Ertas, I. E., Yildirim, G., Celebi, I., Ark, C., & Boran, B. (2014). A 5-year follow-up study comparing Burch colposuspension and transobturator tape for the surgical treatment of stress urinary incontinence. *International journal of gynaecology and obstetrics: the official organ of the International Federation of Gynaecology and Obstetrics*, 125(1), 73–77.
- 3.Burch colposuspension suture placement. (From Karram MM. Retropubic urethropexy for stress incontinence. In: Baggish MS, Karram MM, editors. Atlas of pelvic anatomy and gynecology surgery. 3rd edition. St Louis (MO): Saunders; 2011. p. 406.) (Fig.1)
- 4.Cashman, S., Biers, S., Greenwell, T., Harding, C., Morley, R., Cooper, D., Fowler, S., Thiruchelvam, N., & BAUS Section of Female Neurological and Urodynamic Urology (2019). Results of the British Association of Urological Surgeons female stress urinary incontinence procedures outcomes audit 2014-2017. *BJU international*, 123(1), 149–159. Urology.