# Incontinence complicates POP repair

## Informed consent and pelvic organ prolapse repair for suitable patients may offer the best strategy to avoid over-treatment

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**Is urogynaecology a new star in medicine? It may seem so considering that in recent months the prestigious *New England Journal of Medicine* has published two articles on the subject: Nager and colleagues' (Urinary Incontinence Treatment Network) *"A Randomized Trial of Urodynamic Testing before Stress-Incontinence Surgery"* which appeared on May 7[1], and Wei et al's (Pelvic Floor Disorders Network) *"A Midurethral Sling to Reduce Incontinence after Vaginal Prolapse Repair"* published on June 20[2].**

Today, one of the hot topics in urogynaecology is urinary incontinence (UI) after pelvic organ prolapse (POP) repair. It is beset by many open controversies due to lack of 1) diagnostic tools to evaluate UI in patients with POP before surgery, and 2) data on urinary incontinence after POP repair because many studies reported objective data on POP resolution and little or nothing on functional results.

The other controversial point is the concept of "social continence." We do not know precisely if a certain grade of incontinence could be considered acceptable. The real outcome evaluation, based on the patient's perspective is often not considered in the majority of the study, and objective or subjective results can be considerable different. Furthermore, divergent results are due to differences in surgical techniques for POP repair (abdominal, vaginal, laparoscopic) and how various defects in different compartments are corrected. For example central compartment POP can be corrected by the vaginal route using a range of apex fixation methods: sacrospinoous, utero-sacral, ileococcigeus suspension etc. More variations are added with a prophylactic anti-incontinence procedure. Different surgical procedures often lead to different results.

Wei and colleagues reported the results of the Outcomes Following Vaginal Prolapse Repair and Midurethral Sling (OPUS) trial which included women without symptoms of stress incontinence and patients with positive prolapse-reduction tests[2]. The study was designed to determine whether prophylactic placement of a midurethral synthetic sling during vaginal repair of prolapse reduced the risk of postoperative urinary incontinence. Compared with women in the sham-incision group, women who had been randomly assigned to the sling group had lower rates of urinary incontinence three months postoperatively (23.6% vs. 49.4%), with benefits maintained at 12 months.

We might well argue that 49.4% of patients with post-operative incontinence are a major problem! In almost half of the patients POP surgical repair corrected one problem but created another, probably worsening, rather than improving, quality of life. And how are the 27.3% of patients with de novo incontinence in the sling group to be treated? More surgery worsens results and incontinence rates are generally higher than after a primary MUS. Furthermore, there is no evidence to show which procedure is the best.

### POP repair

These findings add to evidence from the Colpopexy and Urinary Reduction Efforts (CARE) trial[3] which reported that a prophylactic Burch colposuspension at the time of transabdominal prolapse surgery reduced the risk of postoperative urinary incontinence, but resulted in more postoperative complications. Adding a bladder-neck suspension at the time of abdominal prolapse surgery in women without preoperative stress incontinence significantly reduced the risk of postoperative stress urinary incontinence (23.8% vs. 44.1% in the control group). Isn't the 44.1% rate of post-operative urinary incontinence rather too high?

Interestingly, in clinical practice AUGS members have not uniformly implemented prophylactic Burch colposuspension at the time of abdominal sacrocolpopexy[4]. Some centres have advised against it in patients without symptomatic stress incontinence due to high rates of voiding dysfunction and de novo urge incontinence when procedures were performed concomitantly[5]. Since the CARE Trial was a single trial, providers might well prefer to see more data before changing clinical practice.

The picture of UI after POP repair is complicated by other studies reporting opposite results (6-8). One single centre RCT included continent patients who underwent colposacropexy with or without Burch colposuspension. At a mean follow-up of 39.5 months, Costantini et al[6] found post-operative incontinence in respectively 35.3% vs 9.3% of patients, with a significantly higher rate in patients who had undergone colposuspension ($p < 0.05$). The eight-year follow-up confirmed these results as 29% of patients were incontinent after Burch compared, with 16% in the group without Burch ($p < 0.553$)[7].

These findings cast doubt as to whether Burch colposuspension should be performed during POP repair in continent women. Clearly colposacropexy alone does not cause post-operative incontinence as UI was present only in 9.3% at the mid-term follow-up and 16% at the long-term.

The surgical technique for POP repair may account for the discrepancies in the findings. The Porena and Costantini technique[6-8] was described as an Integral Pelvic Floor reconstruction. The technique was designed to provide support and suspension, to restore the pelvic floor and to replace ruptured ligaments using meshes. In this matter it is possible to correct anterior and posterior segments, central and lateral defects, vault, uterine prolapse and enterocele. The wide preparation of the anterior vaginal wall as far as the bladder neck corrected also urethrocele, did not cause de novo incontinence and cured 61% of incontinent patients.

### Conflicting evidence

Taking into consideration all this conflicting evidence, the 2010 Cochrane Review on Surgical management of POP in women[9] concluded that 1) continence surgery in concomitance with prolapse surgery in continent women did not significantly reduce the rate of post-operative or the novo SUI (RR 1.39, 95% CI 0.53 to 3.70); 2) de novo SUI will be prevented in approximately 20% of women if continence surgery is performed with POP surgery in all women who have occult stress incontinence pre-operatively, but 80% will have an unnecessary procedure; and finally 3) further evaluations are required and the benefit needs to be balanced against differences in costs and adverse effects.

It is likely that the conclusions will depend on different healthcare systems and that the women's own priorities and attitudes will vary. It is interesting to note that the OPUS study also concluded that "The decision to perform – or not to perform – prophylactic anti-incontinence surgery should factor in the goals and desires of the patient, the skill and experience of the surgeon, and the risks and potential benefits for a particular patient."

Finally, to prevent over-treatment, the best strategy seems to be a clear informed consent and only POP repair for women who are continent, being careful to use a technique that will not cause incontinence after surgery. Surgical approaches that are associated with high post-operative incontinence rates should be analysed carefully for appropriateness.

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## John 'Jack' Thomas Grayhack, 1923-2012

*Surgeon, scientist and loving father*

The European Association of Urology conveys its condolences to the family of Dr. John 'Jack' Thomas Grayhack, 89, a world-renowned physician, surgeon, researcher and scholar.

Grayhack received his BA and MD from the University of Chicago. After a general surgery internship and residency at Johns Hopkins, Grayhack spent a year at Brady Research Laboratory and became interested in urology. He completed his urological training at Brady in 1953. He was an assistant professor at Hopkins and served two years in the Air Force before moving in 1956 to Northwestern University where he was appointed chairman and Herman Kretchmer Professor of Urology in 1963, a position he held until 1989.

Grayhack was a recipient of some of urology's most prestigious awards, including the AUA's Hugh Hampton Young Award (1979), the Eugene Fuller Prostate Award (1989), the Russell and Mary Hugh Scott Education Award (1991), Ramon Guiteras Award (1994) and Presidential Citation (2002). He served on numerous AUA committees and as president of the American Board of Urology and the American Association of Genitourinary Surgeons. He was awarded the Keyes Medal (2001) and the Barringer Medal (1980). Grayhack also edited the Yearbook of Urology (1963 -1978) and the Journal of Urology (1985-1994).

Grayhack and his late wife Betty were married for 62 years. His children and grandchildren remember with fondness his passion for hunting, fishing and summers on Diamond Lake in Canada.

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