

# Management of uterine prolapse in young women

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## ABSTRACT

Uterine prolapse is a benign condition, affecting women of all age and occurring after vaginal child birth or other condition, it weakens the muscle and tissues of pelvic floor resulting in uterus drop into the vagina. Various options for treatment exist from conservative to radical surgery. Up to date, the FDA ban of synthetic mesh use does not concern the use of abdominal repair of uterine prolapse but this could become prohibited in future, forcing surgeons to think about viable alternatives and to try new methods. Further reports should be done to ameliorate the patient quality of life especially for young women who desire to keep their sexual life and fertility abilities. We conducted a literature review to study the opportunities and outcomes of treating uterine prolapse in young women.

**Keywords:** uterine prolapse, synthetic mesh, sacro-hysteropexy, LUSSH, biological graft

## INTRODUCTION

Uterine prolapse is not only an elderly disease but can affect young women, causing many troubles varying from sexual life disturbance to urinary incontinence affecting their quality of life and causing psychological troubles. Many treatment opportunities are available from conservative to more radical care. Taking into account that young women could desire pregnancy it seems important to review the different options available in order to define a convenient and safe procedure.

We conducted a literature review to study the opportunities and outcomes of treating uterine prolapse in young women.

## TREATMENT OPTIONS FOR UTERINE PROLAPSE IN YOUNG WOMEN

The medical literature is very clear about treatment of uterine prolapse for elderly, but we only find few recommendations concerning the younger

patient. For the purpose of this study we defined a young patient as a woman on fertile age; it is estimated that 50% of parous women could develop prolapse and 10-20% of them will seek medical care (1).

Conservative treatment as vaginal pessaries are useful for women who are planning a pregnancy and as a temporary measure before a surgery, but they appear to be inconvenient for long-term treatment in sexually active women (2) or create complaints as discharge ulceration and dyspareunia (3).

Other methods as physiotherapy or electrical therapy for pelvic floor seem to be helpful, but none of them have real evidence for efficacy.

As surgical treatment, vaginal hysterectomy could be a convenient procedure for treating uterine prolapse but the uterus does not play a role in the pathogenesis of uterine prolapse (2) thus understanding the dynamics of pelvic floor gives us other opportunities. On the other hand, a woman's perception that the uterus is necessary for sexuality increases the number of women refusing hysterectomy.

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my. Finally, this option cannot be appropriate for women who desire further fertility (3).

Other proven methods described in the literature and consisting in cervical and uterine suspension, can be done through vaginal sacrospinous cervico-colpopexy (sacrospinous fixation), vaginal posterior intravaginal slingsplasty, high levator myorrhaphy, uterosacral ligament vault suspension, vaginal Mayo McCall repair or abdominal sacro-hysteropexy.

Abdominal or laparoscopic sacro-hysteropexy is the most used method nowadays, Crépin et al. (4) defining it as a gold standard, with the amendment that women who desire further pregnancy should undergo a caesarean section in order to avoid traumas.

Tahir et al. (1) in their prospective study on 12 patient with uterovaginal prolapse and desire to maintain their uterus, had 25% of the patients' aged 16-20 years and 75% in the age interval 30-40; 83.3% of them were multipara, no complication were noted, the successful repair was reported in 10 cases, while 2 patients underwent repeat surgery. Barranger et al. (5) conducted a long-term follow up on abdominal sacro-hysteropexy and concluded that it is safe and effective with only 6% of risk of complication.

Szymanowski et al. (6) presented a case report of a 43-year old woman with total uterus prolapse, who was treated by transabdominal sacro-colpopexy through laparoscopy, and consider that it should be the gold standard treatment in young women. Chevrot et al. (7) evaluated the impact on symptoms and quality of life on a 36 months follow up and concluded that this technique improves functional outcome.

## UTERINE PROLAPSE DURING PREGNANCY

Uterine prolapse during pregnancy is rare, 1 per 15,000 deliveries, Kim et al. (8) published about a 32-year old woman that presented at 28 weeks of gestation with a complicated pregnancy; while most authors should recommend elective caesarean section, the patient underwent vaginal birth with no complication.

Karatayli et al. (3) reported a case of 33 year old woman with twin gestation and total uterine prolapse at 33 weeks of gestation, that presented with clinical labor and fetal distress. The patient underwent a two-step surgery, cesarean delivery with secondary abdominal hysteropexy using rectus fascia strips; no complication was recorded, this result being encouraging for patient seeking care.

Another rare case was demonstrated by Halilogu et al. (9). They performed laparoscopic sacrohysteropexy on 12 weeks and 3 days pregnant woman, the

fixation of the promontory was done with a polypropylene mesh, no complication was recorded, the patient delivered at 38 weeks of gestation a healthy baby. Pirtea et al. (10) also performed the same procedure on 10 weeks pregnant woman with the same encouraging results.

## COMPLICATIONS ASSOCIATED WITH SYNTHETIC MESH REPAIR

In 2011, the Food and drug Administration (FDA) issued a communication warning about serious complications associated with mesh repair such as degradation erosion and infection (11), causing dyspareunia, pelvic pain, vaginal discharge and bad smell, severely affecting the quality of life of patients. They suggested that a clear discussion should take place between the surgeon and the patient about the indication, risks, benefits and possible alternatives. In the literature, the prevalence of complication is about 25%, dyspareunia account for 30% of them, while erosion and pelvic pain for 42 and 36% respectively (12).

The perception of the patient about mesh usage was evaluated by Tenggardjaja et al. (13), on 214 young women with urinary incontinence or prolapse, and the results of the questionnaires show that the television was an important source of information following FDA report; it had impact raising the awareness of patient about the risk of complication, making 52% of them belief they should recall the use of synthetic mesh.

While using synthetic mesh for abdominal and laparoscopic sacrocolpopexy is considered as the gold standard treatment for uterine prolapse on women, the FDA placed in 2019 a complete ban of production of synthetic transvaginal meshes for treating urinary incontinence and prolapses because of the increased number of complications (14), but the indication for abdominal repair using synthetic mesh was not abandoned and remains a gold standard. Unfortunately, this could mislead patient perception of abdominal mesh use due the high media coverage of this announce and diverse fake news reported (15) provoking more fear, uncertainty and doubt.

Over the past decades, polypropylene mesh has been extensively used in different type of surgical procedure. Demirci et al. (16) evaluated the use of propylene mesh in young women who desired to preserve their uterus; 20 patients benefit from the intervention that had excellent success rate and could preserve durable anatomic restauration, giving the women the opportunity to retrieve normal sexual function, although 3 of them complained of dyspareunia. On the other hand, Leron et al. (17) recommended the use of teflon mesh as an effec-

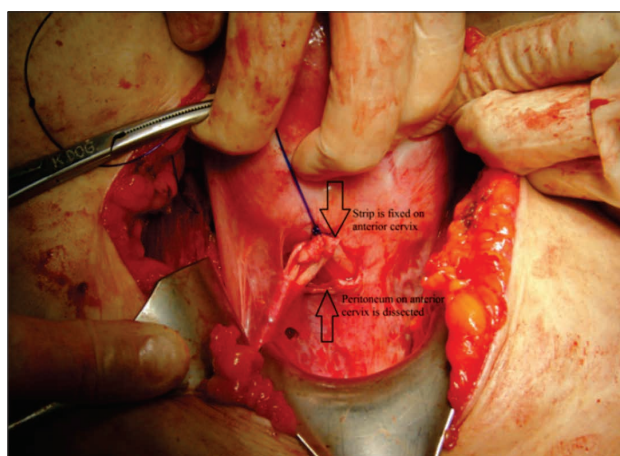
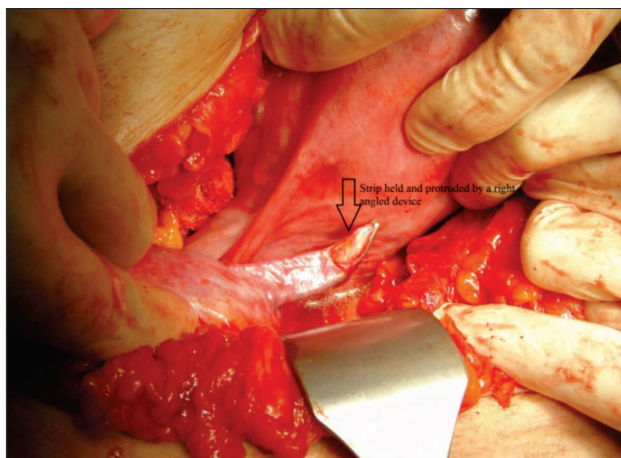


FIGURE 1. Abdominal hysteropexy using rectus fascia strips (3)

tive, safe and durable method with no intra or post-operative complication.

## FUTURE PERSPECTIVES

Following the questionable risk of synthetic mesh, an alternative approach was proposed by Karatayli et al. (3) without the need of any mesh: 12 women aged 28-41 underwent an abdominal hysteropexy using rectus fascia strips that are protruded retroperitoneally, then attach to the anterior cervix, the operative result were encouraging with no complication neither quality of life complain, this could be a safe alternative for women who desire to preserve their uterus.

Another mesh-free laparoscopic procedure was developed by Jan et al. (18) as a video article named uterosacral suture sacrohysteropexy (LUSSH) who was performed on a 37 year old patient who refused all mesh procedure; it consisted in fixing the promontorium to the uterosacral ligaments and the cervix using non resorbable suture. Further report on this technique should be done in order to prove its efficiency.

Another future perspective could be represented by the biological graft. Alexandridis et al. (19)

evaluated the use of porcine intestinal submucosa graft named Surgisis in his department; out of 155 procedure complication accounted for 56% of operated patients, while 28% of them suffered from recurrence. The clear benefit of this procedure remains questionable, as well as current literature about biological graft is limited (20).

A randomized controlled trial was done by Culligan et al. (21) investigating the objective anatomic outcomes of both synthetic mesh and biological graft showing better outcome from synthetic mesh in the treatment of uterine prolapse.

## CONCLUSIONS

Up to date, the FDA ban of synthetic mesh use does not concern the use abdominal repair of uterine prolapse, but this could become prohibited in future, forcing surgeons to think about viable alternatives and to try new methods. Further reports should be done to ameliorate the patient quality of life especially for young women who desire to keep their sexual life and fertility abilities.

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