

RECURRENT INFECTION OF ANTERIOR WALL OF VAGINAL AFTER POP SURGERY USING MESH IN FIRST AFFILIATED HOSPITAL OF DALIAN MEDICAL UNIVERSITY, CHINA.**Tesfaye Z. Weldegiorgis¹*(PhD) and Abdelhakam G. Tamomh²(PhD)**¹Department of Public Health, Dalian Medical University, Dalian, China.²College of Medical Laboratory Sciences, Dalian Medical University, Dalian, China.***Corresponding Author: Dr. Tesfaye Z. Weldegiorgis**

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ABSTRACT

A 47-year-old woman presented with the complaints of vaginal pain for 8 months. Nine months before her presentation, she got III degree pelvic organ prolapse (Ba) and stress urinary incontinence (moderate); and underwent anterior vaginal wall repair (patch) + Trans vaginal tape obturator (TVT-O) respectively. The pelvic examination, sim's speculum examination and bimanual examination were done at the time of admission. The Laboratory investigations including bacterial count (BACT), Red blood cell count (RBC) and white blood cell count (WBC). U/S and cystoscopic examination done, no abnormality of bladder seen. The patient was diagnosed with vaginal wall abscess. The cyst was removed and She has given an anti-biotic, a moxifloxacin. On the seventh post-operative day, the pain, burning and incomplete bladder emptying were under control to allow the patient to walk and she was discharged after a couple of days. The woman backed to the hospital with aggravated vaginal pain during maturation. Laboratory investigation showed an elevation of bacterial count. The physical examination was otherwise normal. Considering the persistent vaginal pain was counseled to undergo urethrocytostcopy which showed the integrity of cyst that grew around the urethra and considered to be urethral gland cyst. The cyst was then removed by cystoscopic urethral gland cyst resection and electro tome excision.

KEYWORDS: Mesh, urethral gland cyst, urethrocytostcopy, POP.**INTRODUCTION**

Pelvic organ prolapse is the descent from its normal anatomical position of one or more of the female genital organs. Gynaecologists have begun to include small pieces of mesh inlays as an extra support to the fascial defects through which the pelvic organs prolapse. The use of mesh at the time of anterior vaginal wall repair reduces the risk of recurrent anterior wall prolapse; however these benefits must be weighed against increased infection, pain/discomfort, de novo stress urinary incontinence and reoperation rate for mesh exposures.^[4] The ideal mesh should be biocompatible, inert, inexpensive, induce minimal inflammatory response and at the same time, act as a scaffold to facilitate fibrous tissue in growth, be resistant to infection, avoid shrinkage and be easy to handle.^[5]

CASE REPORT

A 47-year-old woman, gravid 2 Para 1 abortion 1, was admitted to department of gynecology with the complaints of vaginal pain for 8 months. Nine months before her presentation, she got III degree pelvic organ prolapse (Ba) and stress urinary incontinence (moderate); and underwent anterior vaginal wall repair (patch) +

Trans vaginal tape obturator (TVT-O) respectively, which has improved her symptoms dramatically. One month following the initial operation, she started to feel vaginal pain and burning which lasts for one minute during micturition. She had been having these complaints on and off before coming to Hospital and every time she was treated empirically with oral ibuprofen (1 piece/ times, twice a day) but never got relieved. After 8 months, she experienced very vague vaginal pain in sitting position than standing. She also described it as "my vagina is accompanied by foreign body sensation", which has always shown intense discomfort, with the worsening of symptoms in the last couples of months. She was also feeling incomplete bladder emptying after micturition. She didn't complain any abnormal vaginal discharge, fever, bowel symptoms, and others. Her obstetric history included one normal delivery, one abortion which was due to unplanned pregnancy; and her menstrual period want to come every 30 to 40 days every month which stays for two days. She didn't have any history of dysmenorrhea. Her medical history was unremarkable; no drug use, smoking, drinking and exposure to radioactive substances and others chemical substances. The pelvic examination

revealed a normal-sized uterus and bilateral adnexa. There was no obvious cystocele or stress incontinence seen in the supine position. Vulva and cervix looked healthy and on sim's speculum examination, the vagina was seen with a small amount of white discharge but no peculiar smell. Bimanual examination showed tenderness over anterior vaginal wall. Result of Laboratory investigations including bacterial count (BACT), red blood cell count (RBC) and white blood cell count (WBC); were all normal. Considering the anterior vaginal wall tenderness and post-operative vaginal pain during micturition, she was counseled to undergo ultra-sonography and cystoscopy for further investigations. At U/S she was found to have a multiple uterine fibroids, fluids that accumulated in the pelvic cavity (20mm deep), cervical cyst that considered as possible Nessler's cyst and an irregular shape of uterus with the size of 42*58*50mm and was no abnormal blood flow on CDFI. At cystoscopic examination, no abnormality of bladder seen. The patient was diagnosed with vaginal wall abscess. The cyst was removed from anterior vaginal wall by puncturing and draining of turbid yellow purulent abscess (15ml) under the general anesthesia guided by ultrasound, which has shown a large number of inflammatory cells on cytologic report. She has given an anti-biotic, a moxifloxacin. On the seventh post-operative day, the pain, burning and incomplete bladder emptying were under control to allow the patient to walk and she was discharged after a couple of days. After one week of discharge, the patient backed to the hospital with aggravated vaginal pain during micturition. She was then hospitalized and subsequently underwent for further investigations. Laboratory investigation showed an elevation of bacterial count (BACT)305.70/ ul but, normal red blood cell count (RBC)5.70 /ul, white blood cell count (WBC) 2.10 /ul, and epithelial cell count (EC)5.10/ul. The physical examination was otherwise normal. Considering the persistent vaginal pain during micturition and an elevated bacterial count, she was counseled to undergo urethrocytoscopy. The urethrocytoscopy under sedation showed the integrity of cyst that grew around the urethra and considered to be urethral gland cyst, but no patch seen around probe cyst.

The cyst was then removed by cystoscopic urethral gland cyst resection and electro tome excision, which has shown the hyperplasia of urethral gland tissue with an inflammatory change on the pathological report. She has taken an ant-inflammatory drug, the moxifloxacin and discharged within seven days of postoperative after she has totally got free from the vaginal pain.

DISCUSSION

Recent studies on mesh (monofilament synthetic polypropylene) implants have shown that the anatomical recurrence rate is very lower after the use of mesh material as compared to classical prolapse repair without mesh.^[1] Mono filament macro porous (pore size > 75 micro meter) polypropylene mesh is preferred for

transvaginal surgery for POP or stress incontinence because of the low risk of infection and foreign body reactions.^[2] The short-and medium-term follow-up effects of vaginal repairs for prolapsed using synthetic polypropylene mesh are promising. What so ever the case, there is still an infection from related complications of meshes from this articles. And also, The important factors of sythetic meshes are flexibility and passage of leucocytes/macrophages. These cells are small enough to pass through pore sizes less than 75mm. Multifilament grafts, however, may have interstices of less than 10mm that will allow passage of small bacteria (<1mm) but not leukocytes, thereby increasing the risk of infection.^[3] However, the use of vaginal meshes has been an advance in the surgical management of women with pelvic organ prolapsed. Patients who undergo POP repair with mesh are subject to mesh-related complications that are not experienced by patients who undergo normal surgery without mesh.^[4] The FDA statement revealed that there are potential synthetic mesh-related complications include; Infection/Sepsis potentiation, Pain, discomfort, irritation, abscess formation/Foreign body reaction, urinary Incontinence, urinary retention and any others like; granulation tissue formation, vaginal shortening or stenosis, mesh and/or tissue contracture.^[5] In our case report, patient only suffered with recurrent infection of anterior wall of vaginal after synthetic replacement in a short follow-up. As the long-term consequences of mesh are still unknown, patients with mesh placed for POP should have long-term (>10 years) follow-up to monitor for complications or symptoms.^[6,7] Complications with mesh can occur several years later and the field is becoming increasingly litigious.^[3] Some of the survey revealed that mesh durability and complication is very lower based with short term follow up and of few limited data; however some of the patient who underwent vaginal procedure healed without any problem, but some group experienced life threatening symptom. So large cohort study is desperately needed to infer the number of mesh- augmented vaginal procedures, that are being performed and its future risk and benefit.^[5]

CONCLUSION

To improve outcomes in transvaginal prolapsed repairs, mesh have been introduced to complement, re-inforce, or replace native tissue in reconstructive surgical procedures. But, mesh related complications especially in short-terms follow-up remains controversial.

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