Clinical Results of Non-Mesh Surgical Repair for Pelvic Organ Prolapse

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In recent years, surgical mesh in the treatment of pelvic organ prolapse have been widely used. But at the same time, many cases were reported about the complication of surgical mesh. The complications were bleeding, infection, and organ perforation. There are many surgical method without using surgical mesh. They are old but safe and reliable. FDA pointed out that the mesh operation have many problems, and manufacturers of surgical mesh recently decided that their mesh should not be used for the repair of pelvic organ prolapse. But sorry to say that many surgeons still use surgical mesh for the treatment of pelvic organ prolapse. Considering these situations, clinical results of surgical repair of pelvic organ prolapse without using surgical mesh were summarized. Old methods in the treatment of pelvic organ prolapse are far superior compared to mesh surgery.

Key words: POP, surgical mesh, Manchester operation, Halban operation, LeFort operation

Introduction

Pelvic organ prolapse (POP) consist of uterine prolapse, cystocele and rectocele. Usually its pathogenesis is damage of pelvic floor muscles during vaginal delivery. The repair of POP has been long and big problem for gynecologists. Around 1880 several gynecologists in Manchester England presented new surgical method for POP, which is known as Manchester operation and still many gynecologists perform this method. Nowadays many surgical methods are known for the repair of POP.

Surgical repair of POP has been dramatically changed after the introduction of surgical mesh in this field. Many gynecologists abandoned classical methods and started to use surgical mesh for the repair of POP. But recent reports suggest many risks about surgical mesh. The main adverse events reported for surgical mesh are erosion, pain, and bleeding. FDA checked the effectiveness and safety of the surgical mesh for POP. The recommendation of FDA is not to use surgical mesh for POP. Therefore it is now very confusing in the field of surgery for POP. It is suggested that there is no need to use surgical mesh for the repair of POP.

Main four methods for POP in Shizuoka hospital

There are many surgical methods for the treatment of POP. In Shizuoka hospital, mainly four methods have been performed.

1) Vaginal hysterectomy and anterior and posterior repair
Anterior repair means lift up of the descending urinary bladder and suture of the anterior vaginal wall. Posterior repair means suture of the levator muscle and suture of the posterior vaginal wall.

2) Manchester operation
This operation consist of anterior and posterior repair and lift up of the uterus by ligation of both side of the cardinal ligament in front of the uterine neck.

3) Halban operation
This method consist of anterior and posterior repair and lift up the uterus by the suture of
both side of round ligament to anterior abdominal wall.

4) Median colpocleisis (LeFort operation)

Vaginal hysterectomy and anterior and posterior repair is the standard method in these four methods. The merit of this method is that clinical outcome is stable in any patient. But, if the patient has any adhesion in abdominal cavity because of former surgery or infection, it is difficult to perform this method. Contrary, Manchester operation can perform to any patient although who has severe adhesion in abdominal cavity. But generally speaking, Manchester operation has much more risk of the recurrence of POP. Halban operation is said that the risk of recurrence is small, but this method has one weak point that this operation needs both vaginal and abdominal approach. LeFort operation is minimal invasive method, but after the operation sexual intercourse will be impossible.

**Outcome of surgical repair of POP in Shizuoka hospital**

Table 1 shows the result of surgical repair of POP from 1998 to 2013. LeFort operation was performed to 132 patients. This is because in this area of Izu peninsula, inhabitants of old age were increasing. Therefore minimum invasive method was chosen. Four cases of patients who were performed LeFort operation relapsed POP. All of them were very fatty patients complicated by diabetes mellitus. One patient who was performed Halban operation attacked with pulmonary infarction, but she has recovered. This is only one big complication of the surgical repair of POP in Shizuoka hospital.

**Discussion**

Percentile rate of adverse event in mesh surgery was reported by FDA\(^1\). Which proved erosion 35.1%, infection 16.8%, organ perforation 5.8% and recurrence 2.1%, so a mesh procedure may put the patient at risk for requiring additional surgery or for the development of new complications. Compare to the data in Shizuoka hospital, mesh operation for POP must be prohibited at least for several years to solve the problem of high rate of complications.

**Reference**

1) Surgical mesh for treatment of women with pelvic organ prolapse and urinary incontinence: FDA executive summary, 2011.