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Zhu L[1], Lang J[1], Ren C[1], Sun Z[1], Liu X[1], Li B[1]
1. *Peking Union Medical College Hospital,Beijing, P.R of China*

PELVIC RECONSTRUCTION WITH MESH FOR ADVANCED PELVIC ORGAN PROLAPSE---- A NEW ECONOMIC SURGERY

Hypothesis / aims of study

To describe a new pelvic reconstructive surgery more adaptable to advanced Chinese pelvic organ prolapse, which uses cheaper vaginal mesh aimed at anterior and apical reconstruction, and to evaluate the anatomic outcomes and safety of this reconstructive
approach.

Study design, materials and methods

It was a multicentral clinical study.Ninety-nine patients over sixty years old with stage III or IV prolapse but without stress urinary incontinence (SUI) underwent the modified pelvic reconstructive surgery and had been under follow-up for more than one year. The objective and subjective outcomes were measured by POP-Q and different types of quality-of-life (QOL) questionnaires, respectively. Complications were also obtained by follow-up.

Results

No severe intraoperative complications were observed. At one year postoperatively, POP-Q measurements of Ba, Bp, and C were significantly improved from baseline (p<0.001), but 8 patients (8.1%) had recurrence. Significant improvement was noted in QOL scores（PFDI-20 and PFIQ-7). The incidence rate of mesh exposure and de novo incontinence was 2% and 12%, respectively.

Table 1 Objective outcomes 1 year after surgery(n=99)

	Preoperative	*Postoperative*	*Change*	*P*
Ba	3.7±2.4	-2.6±1.4	6.3±2.5	<0.001
Bp	0.5±3.2	-2.8±1.0	3.3±3.3	<0.001
C	2.4±4.2	-4.3±5.1	6.7±5.8	<0.001
TVL	7.6±1.6	6.2±3.5	1.5±3.5	0.001

Table 2 Subjective outcomes 1 year after surgery(n=99)

	Preoperative	*Postoperative*	*Change*	*p*
PFIQ	72.0±64.5	10.0±34.8	62.0±60.2	<0.001
UIQ	25.4±28.0	3.9±13.7	21.5±26.2	<0.001
CRAIQ	10.5±22.3	1.8±11.0	8.8±20.0	<0.001
POPIQ	37.6±30.0	4.2±14.3	33.4±28.7	<0.001
PFDI	71.1±41.8	15.65±21.6	55.5±38.4	<0.001
UDI	23.3±18.8	10.0±14.2	13.3±17.2	<0.001
CRADI	13.3±14.3	2.4±5.9	10.9±14.6	<0.001
POPDI	36.1±20.3	4.3±9.8	31.8±9.8	<0.001

Interpretation of results

In clinical practice, we found the most common cases in pelvic organ prolapse is severe anterior vaginal wall prolapse, stage II and III POP-Q uterus prolapse and mild posterior vaginal wall prolapse. Moreover, Chinese women generally have smaller pelvic floor and less obesity. For the feature of prolapse, we modified vaginal mesh procedure to focus on supporting the anterior and middle compartments. We used only one mesh to achieve these effects and to cost less. Medical fee of mesh for modified total pelvic reconstruction surgery is 4000 yuan. It is only one quarter of the medical fee of mesh for total prolift kit (16000 yuan).

The main post-operative complication of mesh insertion is erosion and exposure, with an occurrence rate around 2.3~12.27% [1,2], most of which occurs during the first 6 months. There was no case of erosion in our multicentral clinical study., and 7 cases (4.8%) of exposure. The exposure rate is not high from our study. One reason is that the mesh we used is not as big as total prolift mesh. Folding mesh is one of the reasons for erosion or exposure.

From our study, additional evaluation on point C and TVL in POP-Q revealed a lower elevation of the vaginal apex after the vaginal mesh procedure since we sutured sacrospinous spine fascia for reconstruction middle compartment. Our data presented significant shortening of vagina, with average vaginal length 6.2cm after operation. Similar findings were reported by other investigators [3].

Modified pelvic reconstruction surgery should be suggested to old patients, in view of de novo dyspareunia after operation.

Concluding message

This new pelvic reconstructive surgery with cheaper vaginal mesh is an economic and efficient method that is more suitable for Chinese old people with severe pelvic organ prolapse.

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Is this study registered in a public clinical trials registry?	**No**
Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Ethics Committee of Peking Union Medical College Hospital,Beijing, China**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**