

· 临床研究 ·

老年子宫脱垂患者腹腔镜下阴道/子宫骶骨固定术前后生活质量情况及其影响因素

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【摘要】目的 探讨老年子宫脱垂患者腹腔镜下阴道/子宫骶骨固定术前后生活质量变化,并评估生活质量的影响因素。**方法** 使用简单随机抽样法对 2021 年 1 月至 2023 年 6 月上海交通大学附属第九人民医院收治的 136 例行腹腔镜下阴道/子宫骶骨固定术治疗的老年子宫脱垂患者展开问卷调查。术前、术后 3 个月及术后 6 个月,使用盆底功能障碍性疾病症状问卷量表(PFDI-20)评估患者症状变化,盆底疾病生活质量问卷-短表 7(PFIQ-7)评估患者生活质量变化,盆腔器官脱垂定量(POP-Q)评估子宫脱垂程度变化。完成 3 次调查且问卷有效的为 128 例。以术后 6 个月 PFIQ-7 评分 ≤ 19.04 分为生活质量良好的标准,将患者分为生活质量良好组(66 例)与生活质量不良组(62 例)。采用 SPSS 24.0 统计软件进行数据分析。根据数据类型分别采用单因素方差分析或 χ^2 检验进行组间比较。使用多因素 logistic 回归模型分析老年子宫脱垂患者术后 6 个月生活质量不良的影响因素。**结果** 128 例老年子宫脱垂患者术后 6 个月内均未复发,患者术后 PFDI-20 及 PFIQ-7 评分均显著低于术前,且术后 6 个月的评分低于术后 3 个月;患者术后 Ba、C、Bp 点的 POP-Q 测量值均较术前改善,差异有统计学意义($P<0.05$)。生活质量良好组与生活质量不良组体质质量指数(BMI)、产次、慢性便秘率、子宫脱垂程度及术后并发症发生率比较,差异有统计学意义($P<0.05$)。logistic 回归分析显示,BMI $\geq 27.0\text{ kg/m}^2$ ($OR=4.284, 95\%CI\ 2.706\sim 6.784; P<0.05$)、产次 ≥ 3 次($OR=3.397, 95\%CI\ 1.786\sim 6.483; P<0.05$)、慢性便秘($OR=2.550, 95\%CI\ 1.159\sim 5.610; P<0.05$)、子宫脱垂 IV 度($OR=3.307, 95\%CI\ 1.772\sim 6.171; P<0.05$)及术后并发症($OR=2.492, 95\%CI\ 1.132\sim 5.484; P<0.05$)均为老年子宫脱垂患者术后 6 个月生活质量不良的危险因素。**结论** 老年子宫脱垂患者腹腔镜下阴道/子宫骶骨固定术后生活质量随术后时间的延长而升高,但肥胖、多产、慢性便秘、重度子宫脱垂及术后并发症是导致患者术后生活质量不良的重要因素,临床可针对上述因素给予相应的防控措施。

【关键词】 老年人;子宫脱垂;围术期;生活质量;纵向研究
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Quality of life before and after laparoscopic colposacropexy and its influencing factors in elderly patients with uterine prolapse

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【Abstract】Objective To explore the changes in quality of life before and after laparoscopic colposacropexy in elderly patients with uterine prolapse and to evaluate the influencing factors of quality of life. **Methods** Using a simple random sampling method, a questionnaire survey was conducted on 136 elderly patients with uterine prolapse, who underwent laparoscopic colposacropexy in Shanghai Ninth People's Hospital Affiliated to Shanghai Jiaotong University from January 2021 to June 2023. Before surgery, and at 3 months and 6 months after surgery, pelvic floor distress inventory-short form 20 (PFDI-20) was used to evaluate the symptom changes of the patients, and pelvic floor impact questionnaire-short form 7 (PFIQ-7) was used to evaluate the changes in their quality of life. Pelvic organ prolapse quantification (POP-Q) was performed to evaluate the degree of uterine prolapse. Totally, 128 patients completed three surveys and the questionnaires were valid. Based on the PFIQ-7 score ≤ 19.04 points at 6 months after surgery as the standard of good quality of life, they were divided into a good quality of life group ($n=66$) and a poor quality of life group ($n=62$). SPSS 24.0 was used for data analysis. According to the data type, one-way analysis of variance or *Chi-square* test was performed for between-group comparison. Multivariate logistic regression model was employed to analyze the influencing factors of poor quality of life in the elderly patients with

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uterine prolapse at 6 months after surgery. **Results** No recurrence was found in the 128 elderly patients with uterine prolapse within 6 months after surgery. The PFDI-20 score and PFIQ-7 scores after surgery were significantly lower than those before surgery, and the scores at 6 months after surgery were lower than those at 3 months after surgery. The postoperative POP-Q measurements at Ba, C and Bp points were improved compared with those before surgery, and the differences were statistically significant ($P<0.05$). The differences in body mass index (BMI), parity, chronic constipation rate, degree of uterine prolapse, and incidence rates of postoperative complications were statistically significant between good quality of life group and poor quality of life group ($P<0.05$). Logistic regression analysis showed that BMI ≥ 27.0 kg/m² ($OR=4.284$, 95%CI 2.706–6.784; $P<0.05$), parity ≥ 3 times ($OR=3.397$, 95%CI 1.786–6.483; $P<0.05$), chronic constipation ($OR=2.550$, 95%CI 1.159–5.610; $P<0.05$), uterine prolapse IV degree ($OR=3.307$, 95%CI 1.772–6.171; $P<0.05$), and postoperative complications ($OR=2.492$, 95%CI 1.132–5.484; $P<0.05$) were risk factors of poor quality of life in the elderly patients with uterine prolapse at 6 months after surgery. **Conclusion** The quality of life after laparoscopic colposacropepy in the elderly patients with uterine prolapse increases with the extension of postoperative time, but obesity, multiparity, chronic constipation, severe uterine prolapse, and postoperative complications are important factors leading to poor postoperative quality of life. Clinically, it is necessary to take corresponding prevention and control measures for the above factors.

【Key words】 aged; uterine prolapse; perioperative; quality of life; longitudinal study

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女性盆腔器官脱垂是妇科常见疾病,流行病学调查发现,20~29 岁女性的发病率在 4.78%,而 70 岁以上女性的发病率高达 28.21%^[1]。老年女性受到器官功能退化、激素变化等因素的影响,较年轻女性更易发生盆腔器官脱垂,中重度脱垂常造成排尿困难、盆腔坠感等症状,影响患者日常生活,外科手术是中重度老年盆腔器官脱垂的主要治疗手段^[2]。另有报道指出,女性盆腔器官脱垂患者中,子宫脱垂是造成患者生活质量下降最重要的因素,且子宫脱垂易复发,纵向观察患者生活质量有其必要性^[3]。目前,对于子宫脱垂患者生活质量的报道以性生活质量观察为主^[4],但大部分老年女性并无性生活,老年子宫脱垂患者一般无性生活要求。故本调查以老年子宫脱垂患者围术期的一般生活质量调查为主旨,进一步分析影响术后生活质量的危险因素。

1 对象与方法

1.1 研究对象

使用简单随机抽样法对 2021 年 1 月至 2023 年 6 月对上海交通大学附属第九人民医院行腹腔镜下阴道/子宫骶骨固定术治疗的老年子宫脱垂患者展开调查。最终对 136 例患者发放问卷,完成手术前后 3 次调查且问卷有效的为 128 例,对该 128 例患者资料进行分析。纳入标准:符合国际尿控制学会建议的盆腔器官脱垂定量分度^[5]的 II~IV 度子宫脱垂;年龄 ≥ 60 岁;行择期腹腔镜下阴道/子宫骶骨固定术治疗;术前经宫颈脱落细胞学检查排除宫颈病

变;认知能力良好,能配合问卷调查。排除标准:既往盆腹腔手术史;合并子宫肌瘤、卵巢肿瘤等其他子宫附件病变需要同时治疗;合并严重心肺功能障碍或凝血功能障碍等手术禁忌;存在神经系统异常导致的尿失禁;视听障碍。患者及家属对研究内容知情,签署纸质版知情同意书。本研究获得上海交通大学附属第九人民医院医学伦理委员会审批(批号:20210784)。

1.2 方法

1.2.1 一般资料收集 术前问卷调查包含人口学资料调查表,获得年龄、婚姻状况、受教育程度等;体质质量指数(body mass index, BMI)、术后并发症等资料由查阅电子病历获得;围术期常规使用盆腔器官脱垂定量(pelvic organ prolapse quantification, POP-Q)法^[5]测量阴道指示点 Ba、C、Bp 与处女膜水平的距离及阴道总长度(total vaginal length, TVL),评估脱垂程度。

1.2.2 盆底功能及生活质量问卷 术前 2~3 d,在安静、无旁人的病室行问卷调查,术后 3 个月及术后 6 个月指导患者门诊复查。(1)使用盆底功能障碍性疾病症状问卷简表(pelvic floor distress inventory-short form 20, PFDI-20)^[6]评估患者症状变化,得分越高症状越严重。(2)使用盆底疾病生活质量问卷-短表 7(pelvic floor impact questionnaire-short form 7, PFIQ-7)^[7]评估患者生活质量变化,得分越高,生活质量越差;参考 Laas 等^[8]的报道,以 PFIQ-7 评分 ≤ 19.04 分为生活质量良好的标准,将术后 6 个月 PFIQ-7 评分 ≤ 19.04 分者纳入生活质量良好组, > 19.04 分者纳入生活质量不良组。

1.3 统计学处理

采用 SPSS 24.0 统计软件进行数据分析。计量资料以均数±标准差($\bar{x}\pm s$)表示,多组间比较采用单因素方差分析,组内两两比较采用 SNK-*q* 检验。计数资料以例数(百分率)表示,组间比较采用 χ^2 检验。采用多因素 logistic 回归模型分析老年子宫脱垂患者术后 6 个月生活质量不良的影响因素。 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 手术前后症状及生活质量、子宫脱垂程度变化

128 例老年子宫脱垂患者术后 6 个月内均未复发,患者术后 PFDI-20、PFIQ-7 评分均显著低于术前,且术后 6 个月的评分低于术后 3 个月,差异均有统计学意义($P<0.05$);患者术后 Ba、C、Bp 点的 POP-Q 测量值也均较术前改善,差异有统计学意义($P<0.05$;表 1)。

2.2 两组患者临床资料及并发症发生情况比较

两组患者 BMI、产次、慢性便秘率、子宫脱垂程度及术后并发症发生情况比较,差异有统计学意义($P<0.05$;表 2)。

2.3 术后 6 个月生活质量不良影响因素的多因素 logistic 回归分析

以生活质量不良作为因变量,单因素分析中有统计学意义的指标为自变量,赋值表见表 3,代入 logistic 回归方程,结果显示,BMI $\geq 27.0\text{ kg/m}^2$ 、产次 ≥ 3 次、慢性便秘、子宫脱垂Ⅳ度及术后并发症均为术后 6 个月生活质量不良的危险因素($P<0.05$;表 4)。

3 讨论

老年女性骨盆筋膜支持组织退化、松弛,更易发生子宫脱垂^[9]。腹腔镜下阴道/子宫骶骨固定术为中重度子宫脱垂的常用术式之一,但手术能引起术后压力性尿失禁等并发症,阻碍患者盆底功能恢复,影响日常生活^[10]。因此,本研究纵向分析老年子宫脱垂患者手术前后盆底功能障碍症状及生活质量、脱垂程度的变化,发现术后 PFDI-20 及 PFIQ-7 评分均显著低于术前,且术后 6 个月的评分低于术后 3 个月;术后 Ba、C、Bp 点的 POP-Q 测量值也均较术前改善。提示腹腔镜下阴道/子宫骶骨固定术可有效复位子宫,提升生活质量,且随着术后时间的延长,生活质量也随之提升。

分娩损伤是子宫脱垂的重要原因,多次分娩者盆底组织损伤风险更高^[11]。本研究结果显示,产次 ≥ 3 次是老年子宫脱垂患者术后 6 个月生活质量不良的危险因素,考虑与多产次者盆底组织更松弛,术后恢复缓慢,而生活质量不高有关。有报道指出,肥胖者腹内压升高,压迫盆底组织,延缓盆底功能恢复^[12]。本研究中,BMI $\geq 27.0\text{ kg/m}^2$ 是患者术后 6 个月生活质量不良的危险因素,与上述报道一致。另外,慢性便秘虽然被认为是女性盆腔器官脱垂的重要诱发因素^[13],但并未见报道指出其对患者术后恢复有不利影响。本研究结果显示,慢性便秘是生活质量不良的危险因素,分析原因可能为慢性便秘者术后排便时腹内压升高,牵拉盆底肌肉组织及神经组织,影响术后恢复。

表 1 手术前后 PFDI-20、PFIQ-7 评分及 POP-Q 比较

Table 1 Comparison of PFDI-20, PFIQ-7 and POP-Q before and after surgery (n = 128, $\bar{x}\pm s$)

Time point	PFIQ-7(points)				
	Household activity	Traffic travel	Social function	Emotional health	Total score
Before surgery	58.43±9.30	20.27±3.89	16.89±3.15	17.65±3.07	113.33±19.46
3 months after surgery	12.21±2.15 [*]	6.03±1.06 [*]	2.66±0.53 [*]	5.93±1.12 [*]	26.83±4.20 [*]
6 months after surgery	10.02±1.96 ^{*#}	4.64±0.78 ^{*#}	1.42±0.22 ^{*#}	3.83±0.59 ^{*#}	19.91±3.78 ^{*#}
F	3 023.137	1 704.534	2 768.240	1 931.127	2 534.063
P value	<0.001	<0.001	<0.001	<0.001	<0.001

Time point	PFDI-20(points)	POP-Q(cm)			
		Ba	C	Bp	TVL
Before surgery	129.86±13.74	-0.21±0.09	3.09±0.58	-1.83±0.37	7.90±1.21
3 months after surgery	36.44±5.89 [*]	-2.55±0.52 [*]	-4.73±0.65 [*]	-2.45±0.45 [*]	8.01±0.96 [*]
6 months after surgery	32.03±5.21 ^{*#}	-2.50±0.51 [*]	-4.63±0.61 [*]	-2.40±0.42 [*]	8.00±0.95 [*]
F	4 678.211	1 271.126	6 834.221	88.320	0.432
P value	<0.001	<0.001	<0.001	<0.001	0.650

PFDI-20: pelvic floor distress inventory-short form 20; PFIQ-7: pelvic floor impact questionnaire-short form 7; POP-Q: pelvic organ prolapse quantification; Compared with before surgery, ^{*} $P<0.05$; compared with 3 months after surgery, [#] $P<0.05$.

表 2 两组患者临床资料及并发症发生情况比较

Table 2 Comparison of clinical data and complications between two groups		[<i>n</i> (%)]		
Item	Poor quality of life group (<i>n</i> = 62)	Good quality of life group (<i>n</i> = 66)	χ^2	<i>P</i> value
Age			1.408	0.235
60–70 years	36(58.06)	45(68.18)		
>70 years	26(41.94)	21(31.82)		
BMI			7.215	0.027
<24.0 kg/m ²	30(48.39)	42(63.64)		
24.0–<27.0 kg/m ²	22(35.48)	22(33.33)		
≥27.0 kg/m ²	10(16.13)	2(3.03)		
Marital status			0.381	0.537
Married	42(67.74)	48(72.73)		
Unmarried/divorced/widowed	20(32.26)	18(27.27)		
Education level			1.092	0.579
Junior middle school or below	29(46.77)	26(39.39)		
Secondary technical school or senior high school	26(41.94)	29(43.94)		
Junior college or above	7(11.29)	11(16.67)		
Parity			6.874	0.032
1 time	16(25.81)	26(39.39)		
2 times	26(41.94)	31(46.97)		
≥3 times	20(32.26)	9(13.64)		
Chronic constipation	21(33.87)	11(16.67)	5.047	0.025
Hypertension	20(32.26)	17(25.76)	0.657	0.417
Diabetes mellitus	14(22.58)	12(18.18)	0.382	0.536
Degree of uterine prolapse			6.989	0.031
II	3(4.84)	8(12.12)		
III	30(48.39)	41(62.12)		
IV	29(46.77)	17(25.76)		
Postoperative complication	9(14.52)	2(3.03)	5.369	0.020
Chronic pelvic pain	5(8.06)	1(1.52)		
Pelvic inflammation	1(1.61)	0(0.00)		
Stress incontinence	3(4.84)	1(1.52)		

BMI: body mass index.

表 3 自变量赋值表

Table 3 Assignments of independent variables	
Independent variable	Assignment
BMI	<24.0 kg/m ² = 0; 24.0–<27.0 kg/m ² = 1; ≥27.0 kg/m ² = 2
Parity	1 time = 0; 2 times = 1; ≥3 times = 2
Chronic constipation	No = 0; Yes = 1
Degree of uterine prolapse	II = 0; III = 1; IV = 2
Postoperative complication	No = 0; Yes = 1

BMI: body mass index.

表 4 术后 6 个月生活质量不良影响因素的多因素 logistic 回归分析

Table 4 Multivariate logistic regression analysis of influencing factors of poor quality of life at 6 months after surgery						
Factor	β	<i>SE</i>	<i>Wald</i> χ^2	<i>P</i> value	<i>OR</i>	95% <i>CI</i>
BMI ≥ 27.0 kg/m ²	1.455	0.369	15.548	<0.001	4.284	2.706–6.784
Parity ≥ 3 times	1.223	0.402	9.256	0.002	3.397	1.786–6.483
Chronic constipation	0.936	0.378	6.132	0.013	2.550	1.159–5.610
Uterine prolapse IV degree	1.196	0.384	9.701	0.002	3.307	1.772–6.171
Postoperative complication	0.913	0.369	6.122	0.013	2.492	1.132–5.484

BMI: body mass index.

此外,疾病本身也是造成术后生活质量不良的关键因素,子宫脱垂分度越高提示盆底组织神经丝蛋白越少,组织弹性越差,导致抗张强度不足,手术效果不佳^[14]。本研究结果显示,子宫脱垂Ⅳ度是生活质量不良的危险因素,提示术前重度子宫脱垂者可能因盆底组织抗张强度差,术后盆底功能难以完全恢复,导致术后生活质量不佳。手术创伤也可造成患者术后疼痛、排尿异常,影响日常生活^[15]。本研究中,术后并发症也是生活质量不良的危险因素,与目前报道一致。

综上所述,腹腔镜下阴道/子宫骶骨固定术可减轻老年子宫脱垂患者盆底功能障碍症状,患者术后生活质量也逐渐提高,肥胖、多产、慢性便秘、Ⅳ度子宫脱垂及术后并发症是造成患者术后 6 个月生活质量不良的危险因素。

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