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流产术后并发宫腔粘连的危险因素分析及宫腔镜联合 雌孕激素的干预效果研究*

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摘要 目的:分析流产术后并发宫腔粘连的危险因素,并探讨宫腔镜联合雌孕激素对宫腔粘连的干预效果,以为宫腔粘连的防治提供依据。**方法:**选取2016年1月至2017年2月于我院接受流产术后并发宫腔粘连的患者100例作为粘连组,另选取同期于我院接受流产术后未发生宫腔粘连的患者100例作为未粘连组。比较粘连组和未粘连组患者基本资料、既往史情况、手术指标,并采用多因素 Logistic 回归分析流产术后并发宫腔粘连的危险因素。进一步将粘连组按照随机数字表法分成对照组(n=50)和观察组(n=50),对照组患者进行雌孕激素治疗,观察组患者进行宫腔镜联合雌孕激素治疗。比较观察组与对照组患者治疗3个周期后首次月经情况以及临床疗效。**结果:**粘连组孕次、产次、吸宫时负压、吸宫时间以及合并盆腔炎时间均高于未粘连组,差异均有统计学意义($P<0.05$)。经多因素 Logistic 回归分析可得,吸宫时负压 ≥ 500 mmHg、吸宫时间 ≥ 15 min 为流产术后并发宫腔粘连的危险因素($P<0.05$)。观察组治疗3个周期后首次月经量减少发生率、首次月经中期子宫内膜厚度 ≤ 8 mm 发生率低于对照组,治疗有效率高于对照组($P<0.05$)。**结论:**吸宫时负压 ≥ 500 mmHg、吸宫时间 ≥ 15 min 均属于流产术后并发宫腔粘连的独立危险因素,临床应根据以上危险因素采取相应预防措施,以减少宫腔粘连的发生。而对于已发生宫腔粘连的患者,采用宫腔镜联合雌孕激素治疗具有较好的干预效果,值得在临床上推广应用。

关键词:流产术;宫腔粘连;危险因素;宫腔镜;雌孕激素;疗效

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Analysis of Risk Factors of Intrauterine Adhesions after Abortion and Intervention Effect of Hysteroscopy Combined with Estrogen and Progesterone*

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ABSTRACT Objective: To analyze the risk factors of intrauterine adhesions after abortion, and to explore the intervention effect of hysteroscopy combined with estrogen and progesterone on intrauterine adhesions, to provide a basis for the prevention and treatment of intrauterine adhesions. **Methods:** 100 patients with intrauterine adhesions after abortion in our hospital from January 2016 to February 2017 were selected as adhesion group. Another 100 patients without intrauterine adhesions after abortion in our hospital during the same period were selected as the non-adhesions group. The basic data, past history and surgical indicators between the adhesion group and the non-adhesion group were compared. Multivariable Logistic regression analysis was used to the risk factors of intrauterine adhesions after abortion. The adhesion group was further divided into control group (n=50) and observation group (n=50) according to random number table method. The control group were received estrogen and progesterone treatment, while the observation group were received hysteroscopy combined with estrogen and progesterone treatment. The first menstruation and clinical efficacy of the observation group and the control group after 3 cycles of treatment were compared. **Results:** Pregnant times, production times, negative pressure during uterine aspiration, time of uterine aspiration and time of pelvic inflammation in adhesion group were higher than those in non-adhesion group, the difference was statistically significant ($P<0.05$). Multivariate logistic regression analysis showed that negative pressure during uterine aspiration ≥ 500 mmHg and time of uterine aspiration ≥ 15 min were risk factors for uterine adhesions after abortion ($P<0.05$). After 3 cycles of treatment, the incidence of first menstrual volume reduction and the incidence of endometrial thickness ≤ 8 mm in the middle period of the first menstruation in the observation group were lower than those in the control group, and the effective rate of the treatment was higher than that in the control group ($P<0.05$). **Conclusion:** Negative pressure during uterine aspiration ≥ 500 mmHg and time of uterine aspiration ≥ 15 min are all independent risk factors for uterine adhesions after abortion, in order to reduce the occurrence

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of intrauterine adhesions, corresponding preventive measures should be taken according to the above risk factors. For patients with intrauterine adhesions, hysteroscopy combined with estrogen and progesterone therapy has better intervention effect, which is worthy of clinical application.

Key words: Abortion; Intrauterine adhesions; Risk factors; Hysteroscopy; Estrogen and progesterone; Curative effect

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前言

宫腔粘连是指由于子宫内层基底层受损而引起的全部或部分宫腔阻塞,从而导致宫腔内子宫内膜粘连的综合征^[1,2]。近年来,随着人工流产和刮宫人数的增多,宫内感染和宫腔粘连的发生率呈逐年增加的趋势。宫腔粘连不仅会影响患者月经量,还会引起周期性腹痛等临床症状,病情严重者甚至会出现闭经、不孕等,对患者的生活质量造成了严重影响^[3]。宫腔粘连的形成因素较为复杂,目前对于其发病原因尚未阐述完全,临床上对其认识也尚未统一。相关研究表明^[4-6],宫腔粘连的发生主要与妊娠相关的刮宫手术,特别是人工流产有关,但由于患者受妊娠相关的手术操作因素的影响,同时引起宫腔粘连的原因也较多,即使是同一种操作在不同的子宫状态下也可能引起不同的结局,因此研究宫腔粘连的危险因素,进而降低流产后并发宫腔粘连的概率显得尤为重要。宫腔粘连的发生与感染、创伤、妊娠等密切相关,而宫腔粘连又较难诊断,加上手术风险高,所以选择合适有效的治疗方案成为目前临床治疗研究的重点^[7,8]。本研究通过分析流产后并发宫腔粘连的危险因素以及采用宫腔镜联合雌孕激素进行干预治疗的效果,旨在为流产后并发宫腔粘连的防治提供依据,现报道如下。

1 对象与方法

1.1 研究对象

选取2016年1月至2017年2月于我院接受流产后并发宫腔粘连的患者100例作为粘连组,另选取同期于我院接受流产后未发生宫腔粘连的患者100例作为未粘连组。纳入标准:(1)患者均接受流产手术,且粘连组患者符合1999年版《中华妇产科学》关于宫腔粘连的诊断标准^[9];(2)所有患者的相关病历资料记录均完整;(3)患者均签署了知情同意书。排除标准:(1)伴有恶性肿瘤疾病者;(2)存在交流障碍者;(3)伴有严重肝肾功能障碍者;(4)合并血液疾病者。本研究经我院伦理委员会批准。将粘连组患者按照随机数字表法分成对照组和观察组,各50例。其中对照组平均年龄(27.01±5.30)岁,平均妊娠时间(40.11±2.10)d,观察组平均年龄(27.79±5.12)岁,平均妊

娠时间(40.23±2.07)d,两组一般资料比较无统计学差异($P>0.05$),均衡可比。

1.2 研究方法

(1)采用问卷调查结合病历资料的形式收集术后并发宫腔粘连和未发生宫腔粘连患者的基本资料、既往史情况、手术指标,主要包括年龄、初潮年龄、受教育年龄、经济收入、孕次、产次、合并盆腔炎时间、诊断性刮宫史、子宫肌瘤切除史、子宫内膜息肉切除史、剖宫产史、吸宫时负压及吸宫时间。(2)对照组患者采用雌孕激素人工周期治疗,戊酸雌二醇3mg,3次/d,连服21d,后10d加用地屈孕酮3mg,3次/d,连服10d,共治疗3个周期。观察组患者在对照组患者的基础上行宫腔镜治疗:采用Olympus宫腔镜及配套设施,患者行膀胱截石位,静脉麻醉,麻醉生效后扩张宫颈,置入宫腔镜。经宫腔镜操作孔置入双极汽化电针、活检钳、微型剪刀等,在宫腔镜直视下分离粘连,同时放置节育环。服药3个周期后再行宫腔镜取环手术。

1.3 疗效评价^[10]

无效:宫腔仍呈筒状狭窄,宫腔与分离前无变化,月经量无改善;有效:可见双侧或一侧输卵管开口,但仍有局部粘连,宫腔较分离前明显变大,宫腔形态基本正常,月经量较术前增多;治愈:输卵管开口及双侧宫角可见,宫腔镜检查宫腔形态正常,月经量恢复正常。治疗有效率=(治愈+有效)/总例数*100%。

1.4 统计学方法

应用SPSS21.0统计软件分析数据。其中计数资料对比予以 χ^2 检验,以率(%)表示。计量资料对比予以t检验,以均数±标准差($\bar{x} \pm s$)表示。采用多因素Logistic回归分析流产后并发宫腔粘连的独立危险因素。检验标准设置为 $\alpha=0.05$ 。

2 结果

2.1 粘连组与未粘连组基本资料对比

两组年龄、初潮年龄、受教育年龄以及经济收入比较差异均无统计学意义($P>0.05$),见下表1。

2.2 粘连组与未粘连组既往史情况及手术指标对比

粘连组孕次、产次、吸宫时负压、吸宫时间以及合并盆腔炎时间均高于未粘连组($P<0.05$),而两组诊断性刮宫史、子宫肌

表1 粘连组与未粘连组基本资料对比

Table 1 Comparison of basic data between adhesion group and non-adhesion group

Groups	n	Age (years old)	Menarche age (years old)	Educational age (years old)	Economic income (thousand yuan / month)
Adhesion group	100	27.40± 5.21	12.35± 2.11	8.94± 2.20	4.41± 1.20
Non-adhesion group	100	27.14± 5.33	12.53± 2.21	9.22± 2.36	4.63± 1.32
t		0.404	0.658	0.943	1.130
P		0.687	0.512	0.347	0.260

瘤切除史、子宫内膜息肉切除史、剖宫产史比较无统计学差异 ($P>0.05$), 见表 2。

表 2 粘连组与未粘连组既往史情况及手术指标对比

Table 2 Comparisons of historic and circumstantial surgical indicators between adhesion group and non-adhesion group

Factors	Adhesion group(n=100)	Non-adhesion group(n=100)	χ^2/t	P
Pregnant times(times)	2.52± 0.90	1.51± 0.50	2.813	0.000
Production times(times)	2.11± 0.73	1.23± 0.64	2.762	0.000
Time of pelvic inflammation(years)	3.46± 0.72	1.26± 0.23	3.068	0.001
History of diagnostic curettage[n(%)]	12(12.00)	10(10.00)	0.204	0.651
History of hysteromyomectomy[n(%)]	5(5.00)	3(3.00)	0.521	0.470
History of endometrial polypectomy[n(%)]	2(2.00)	2(2.00)	0.000	1.000
History of cesarean section[n(%)]	11(11.00)	10(10.00)	0.053	0.818
Negative pressure during uterine aspiration(mmHg)	544.64± 51.81	438.93± 42.74	2.845	0.000
Time of uterine aspiration(min)	16.22± 1.50	12.34± 1.06	2.833	0.000

2.3 流产后并发宫腔粘连的多因素 Logistic 回归分析

以流产后是否发生宫腔黏连为因变量, 将上述具有统计学差异的指标孕次、产次、吸宫时负压、吸宫时间以及合并盆腔炎时间作为自变量(赋值说明: 孕次 ≥ 2 次 =1, 孕次 < 2 次 =0; 产次 ≥ 2 次 =1, 产次 < 2 次 =0; 吸宫时负压 ≥ 500 mmHg=1, 吸

宫时负压 < 500 mmHg=0; 吸宫时间 ≥ 15 min=1, 吸宫时间 < 15 min=0; 合并盆腔炎时间 ≥ 3 年 =1, 合并盆腔炎时间 < 3 年 =0), 纳入多因素 Logistic 回归分析模型, 结果显示, 吸宫时负压 ≥ 500 mmHg、吸宫时间 ≥ 15 min 均为流产后并发宫腔粘连的独立危险因素($P<0.05$), 见表 3。

表 3 流产后并发宫腔粘连的多因素 Logistic 回归分析

Table 3 Multivariate Logistic regression analysis of intrauterine adhesions after abortion

Factors	β	SE	Wald	P	OR	95%CI
Pregnant times ≥ 2 times	2.271	0.563	1.121	0.658	1.035	0.735~7.871
Production times ≥ 2 times	2.283	0.729	1.367	0.615	2.745	1.218~7.436
Time of pelvic inflammation ≥ 3 years	1.068	1.028	0.897	0.747	2.516	1.415~9.173
Negative pressure during uterine aspiration ≥ 500 mmHg	2.846	0.448	3.891	0.000	3.284	1.325~8.047
Time of uterine aspiration ≥ 15 min	2.937	0.738	5.314	0.000	3.411	1.533~10.012

2.4 观察组与对照组治疗 3 个周期后首次月经情况比较

中期子宫内膜 ≤ 8 mm 发生率均低于对照组($P<0.05$), 见表 4。

观察组治疗 3 个周期后首次月经量减少发生率、首次月经

表 4 观察组与对照组治疗 3 个周期后首次月经情况比较[n(%)]

Table 4 Comparison of the first menstruation after three cycles of treatment between the observation group and the control group[n(%)]

Groups	n	Incidence of reduced menstrual volume	Incidence of ≤ 8 mm endometrium in mid-menstrual period
Observation group	50	3(6.00)	2(4.00)
Control group	50	10(20.00)	14(28.00)
χ^2		4.332	10.714
P		0.037	0.001

2.5 观察组与对照组患者疗效比较

与对照组比较, 观察组治疗有效率明显升高($P<0.05$), 见表 5。

3 讨论

当子宫腔、子宫颈管、子宫峡部由于宫腔手术操作、感染以

及放射性等损伤了子宫内膜, 破坏了子宫内膜的完整性时, 会引起子宫间质中的纤维蛋白原渗出、沉积, 从而导致宫腔部分或全部粘连^[11-13]。宫腔粘连可导致患者出现月经异常、闭经以及不孕等临床问题, 对患者的生殖健康造成了严重影响^[14]。目前, 对于宫腔粘连的发病原因尚未阐述完全。有研究报道显示, 大部分的宫腔粘连均由宫腔手术操作导致, 且与妊娠存在密切相

表 5 观察组与对照组患者疗效比较[n(%)]

Table 5 Comparison of curative effect between observation group and control group[n(%)]

Groups	n	Cure	Effective	Invalid	Efficiency of treatment
Observation group	50	28(56.00)	19(38.00)	3(6.00)	47(94.00)
Control group	50	17(34.00)	23(46.00)	10(20.00)	40(80.00)
χ^2					4.332
P					0.037

关,特别是接受流产术的患者易发生宫腔粘连^[15-17]。由此,明确流产后宫腔粘连的影响因素,对临床针对性干预措施的制定具有重要意义,且有利于降低流产后并发宫腔粘连的发生率,提高流产患者的生殖健康及生存质量。

本研究结果显示,粘连组和未粘连组年龄、初潮年龄、受教育年龄以及经济收入对比无统计学差异,表明患者年龄、初潮年龄、受教育年龄以及经济收入均不会影响流产后并发宫腔粘连。与此同时,粘连组孕次、产次以及合并盆腔炎时间均高于未粘连组,提示孕次、产次以及合并盆腔炎时间均可能是导致患者术后并发宫腔粘连的影响因素,因此,对于孕次以及产次较多的孕妇尽量不要接受流产术,避免宫腔粘连的发生。盆腔炎主要是指患者盆腔生殖器官以及子宫周围的盆腔腹膜以及结缔组织所发生的炎症,对该类患者进行流产后,由于受炎症的影响,从而易导致患者术后发生炎症反应,进一步增加了宫腔粘连发生的风险^[18,19]。粘连组和未粘连组诊断性刮宫史、子宫肌瘤切除史、子宫内膜息肉切除史、剖宫产史比较并无统计学差异。分析原因可能是由于近年来微创技术的逐渐成熟,使得诊断性刮宫、子宫肌瘤切除和子宫内膜息肉等宫腔操作对子宫内膜损伤降低,并且宫腔操作后患者损伤的子宫内膜能被周围的内膜基底层增生代替,因此宫腔操作对宫腔影响较小^[20-22]。此外,粘连组吸宫时负压、吸宫时间均显著高于未粘连组,提示吸宫时负压过高以及吸宫时间过长均会增加患者流产后并发宫腔粘连的风险。吸宫时负压以及吸宫时间均是临床上用以反映患者吸宫术损伤程度的相关指标,吸宫负压越高、时间越长即表明了患者损伤程度越严重,存在过度刮宫,使得子宫内膜基底层存在遭受损害的可能,从而易导致宫腔粘连的发生^[23]。经多因素 Logistic 回归分析可得,吸宫时负压 ≥ 500 mmHg、吸宫时间 ≥ 15 min 均为影响流产后并发宫腔粘连的危险因素,提示在临床工作中可以根据上述各危险因素制定具有针对性的干预措施,从而降低流产后宫腔粘连的发生率。

目前临床上应用宫腔镜可以直观、简单、安全地解决一些较难处理的妇科疾病,宫腔镜可以准确判断粘连的程度、类型以及粘连的坚韧度^[24,25]。宫腔镜手术操作简单,不需要开腹,手术创伤性较小,并且可以明显降低切开感染的风险^[26]。宫腔镜手术后仍有可能发生宫腔再次粘连,需要进一步采取预防措施。重复宫腔检查、宫内放入透明质酸钠、宫内放置球囊导尿管、羊膜移植术、放置宫内节育器以及药物预防是目前常见的防粘连预防措施^[27,28]。雌孕激素是常见的药物预防方法之一,其能够促进间质细胞和子宫内膜细胞的有丝分裂,引起子宫内膜基底层、血管等增厚和增生,加速裸露区上皮化,修复创面,促进子宫内膜再生^[29,30]。本研究结果显示,观察组 3 个周期后首次

月经量减少发生率、首次月经中期子宫内膜厚度达到 8 mm 发生率以及治疗有效率均优于对照组($P<0.05$),说明宫腔镜联合雌孕激素治疗宫腔粘连具有较好的治疗效果。

综上所述,流产后并发宫腔粘连的危险因素包括吸宫时负压 ≥ 500 mmHg、吸宫时间 ≥ 15 min,临床应根据以上危险因素制定相应的干预措施,已防止宫腔粘连的发生。对于已发生宫腔粘连的患者,采用宫腔镜联合雌孕激素进行干预可有效分离粘连,防止术后再粘连的发生,促进病情改善,值得临床上推广与应用。

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(上接第 3167 页)

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