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阴道超声监测卵泡发育及子宫内膜厚度变化对治疗不孕症妇女的临床价值

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摘要 目的:研究阴道超声监测卵泡发育及子宫内膜厚度变化对治疗不孕症妇女的临床价值。**方法:**选取从 2015 年 4 月至 2016 年 9 月于我院收治的 71 例不孕症患者记为观察组。另取同期正常体检者 71 例记为对照组。分别采用阴道超声对两组的卵泡发育以及子宫内膜厚度情况进行监测,观察两组卵泡成熟情况、子宫内膜厚度变化。**结果:**观察组卵泡成熟占比显著低于对照组,而无卵泡发育占比显著高于对照组,差异均有统计学意义(均 $P < 0.05$)。观察组子宫内膜三线型人数占比显著低于对照组,而均质型人数占比显著高于对照组,差异均有统计学意义(均 $P < 0.05$)。观察组排卵前卵泡直径与子宫内膜厚度均显著低于对照组,差异均有统计学意义(均 $P < 0.05$)。**结论:**阴道超声监测卵泡发育及子宫内膜厚度变化对不孕症的临床诊断以及治疗均有重要的临床价值。

关键词: 阴道超声; 卵泡发育; 子宫内膜厚度; 不孕症

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The Clinical Value of Vaginal Ultrasound to Monitor Follicular Development and Endometrium Thickness Change in the Treatment of Women with Sterility

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ABSTRACT Objective: To study the vaginal ultrasound to monitor follicular development and endometrium thickness changes on the clinical value of treatment of sterility women. **Methods:** Selected 71 cases of infertility patients in our hospital from April 2015 to September 2016 as observation group. Another 71 cases with regular check-up as control group. Vaginal ultrasonography in two groups were used respectively to monitor the condition of the follicular development and endometrium thickness, and comparative analysis has been made. **Results:** The proportion of follicular maturation in the observation group was significantly lower than the control group, while the proportion of non follicular development was significantly higher than that in the control group, the difference was statistically significant (all $P < 0.05$). The proportion of three linear was significantly lower than the control group, while the proportion of homogeneous type was significantly higher than the control group, the difference was statistically significant (all $P < 0.05$). The diameter of follicles and endometrial thickness in the observation group were significantly lower than those in the control group, the difference was statistically significant (all $P < 0.05$). **Conclusion:** Vaginal ultrasound monitoring follicle development and changes of endometrial thickness on the clinical diagnosis and treatment of infertility has important clinical value.

Key words: Vaginal ultrasound; Follicular development; Endometrial thickness; Infertility

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前言

不孕症是临床上困扰女性健康的常见疾病,有研究报道显示,目前全球范围内的不孕症患者约有 8000 万^[1]。其中引发不孕症的因素较多,主要包括排卵障碍、输卵管因素等^[2]。其中排卵障碍是导致不孕症的常见因素,约占不孕症的 25~35%^[3]。因此,寻找一种有效的可对卵泡发育情况进行直观观测的方法,并及时、准确的预测排卵日期,是降低不孕发病率的重要方法。经阴道超声能够直观的观察卵泡大小、形态变化,从而预测排

卵日期,对临床指导不孕症治疗有重要的意义。本研究通过分析阴道超声监测卵泡发育及子宫内膜厚度变化,旨在为指导临床有效治疗不孕症提供参考依据。现报道如下。

1 资料和方法

1.1 临床资料

选取从 2015 年 4 月至 2016 年 9 月,于我院收治的不孕症患者 71 例,记为观察组。纳入标准:(1)均为原发性不孕症患者;(2)未采取避孕措施;(3)所有患者均签署了知情同意书。排除标准:(1)男方不孕者;(2)伴有卵巢肿瘤疾病者;(3)子宫畸形;(4)输卵管堵塞者。另取同期正常体检者 71 例记为对照组。其中观察组年龄 22~40 岁,平均年龄(30.2±3.4)岁,对照组年龄 23~40 岁,平均年龄(30.3±3.5)岁。两组人员在年龄、性别

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等基本资料对比无差异($P>0.05$),具有可比性。本研究已获得医院伦理委员会的审核与批准。

1.2 研究方法

两组研究者均取截石位,并稍微垫高臀部。使用日立阿洛卡 Prosound a7 超声诊断仪进行监测,频率为 5~9 MHz。实行监测前,首先给阴道探头套上避孕套,随后缓慢进入阴道,紧靠阴道双侧的宫颈部与穹隆部进行全方位扫描,详细观察两组受试者卵泡数量、状态、大小情况以及子宫内膜变化情况。其中子宫内膜厚度取子宫内膜壁与壁间的最大距离。

1.3 评估标准^[4]

(1)卵泡成熟:最大直径 ≥ 18 mm,形态饱满,形态接近圆

形;(2)无优势卵泡:最大直径 <18 mm;(3)无卵泡发育:监测过程中未发现受试者卵巢部位有直径 >10 mm 的囊样回声。

1.4 统计学方法

采用 SPSS21.0 统计软件分析。计数资料比较采用 χ^2 检验。计量资料比较采用 t 进行检验,以均数 $\pm$ 标注差($\bar{x} \pm s$)表示。 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组排卵以及卵泡发育情况对比

观察组卵泡成熟占比显著低于对照组,而无卵泡发育占比显著高于对照组,差异均有统计学意义(均 $P<0.05$)。见下表1。

表 1 两组排卵以及卵泡发育情况对比[n(%)]

Table 1 Comparison of ovulation and follicular development between the two groups[n(%)]

Groups	n	Follicular maturation	Non dominant ovulation	Non follicular development
Observation group	71	34(47.89)	8(11.27)	14(19.72)
Control group	71	57(80.28)	3(4.23)	0(0.00)
χ^2 value	-	16.186	2.464	15.531
P value	-	0.000	0.117	0.000

2.2 两组子宫内膜类型对比

观察组子宫内膜三线型人数占比显著低于对照组,而均质

型人数占比显著高于对照组,差异均有统计学意义(均 $P<0.05$)。见下表 2。

表 2 两组子宫内膜类型对比[n(%)]

Table 2 Comparison of endometrial types of two groups[n(%)]

Groups	n	Three linear	Homogeneous type
Observation group	71	35(49.30)	36(50.70)
Control group	71	58(81.69)	13(18.31)
χ^2 value	-	16.484	16.484
P value	-	0.000	0.000

2.3 两组排卵前卵泡直径以及子宫内膜厚度对比

观察组排卵前卵泡直径与子宫内膜厚度均显著低于对照

组,差异均有统计学意义(均 $P<0.05$)。见下表 3。

表 3 两组排卵前卵泡直径以及子宫内膜厚度对比

Table 3 Comparison of the diameter of follicles and endometrial thickness between the two groups

Groups	n	Diameter of follicles(mm)	Endometrial thickness(mm)
Observation group	71	18.22 $\pm$ 2.69	8.95 $\pm$ 3.51
Control group	71	25.66 $\pm$ 2.87	11.23 $\pm$ 3.14
t value	-	2.937	2.779
P value	-	0.000	0.000

3 讨论

近年来,由于多种因素的影响,不孕症病例逐渐增加,目前已成为国内外备受关注的健康生殖问题^[5-8]。而女性不孕症部分患者的病因是排卵障碍,其中卵泡发育异常以及子宫内膜出现异常变化均可导致排卵障碍^[9-11]。因此,准确地监测卵泡的生长发育以及子宫内膜变化显得尤为重要。既往,在临床上用以测定排卵时间的方法包括测量基础体温、宫颈黏液评分、阴道脱落细胞检查以及检测血、尿中一系列激素水平的改变情况等^[12,13]。但上述手段均无法监测到卵泡生长发育的整个过程,从而无法

精确提示卵泡成熟、排卵以及子宫内膜发育情况。而随着医疗水平的不断进展以及医疗器械的逐渐改进,阴道超声作为一种新型的检测手段开始应用于临床中,该手段可有效连续观察卵泡生长发育的全过程,预测排卵期,同时可观察到子宫内膜的变化情况,在临床治疗不孕症方面具有极其重要的意义^[14,15]。

本研究通过对不孕症和健康女性的对照研究发现,观察卵泡成熟占比显著低于对照组,而无卵泡发育占比显著高于对照组,这与林小琼等人的研究报道相似^[16],证实不孕症女性存在卵泡发育异常的问题,值得注意的是不孕症女性中仍有 47.89%的妇女卵泡可以正常成熟,对于这部分女性通过阴道超

声可准确地观察到卵泡生长发育全过程,制定合适的时间,指导夫妻同房,提高受孕率。而何楠的研究报道显示^[17],通过阴道超声观察卵泡发育情况,可有效判断是否存在优势卵泡,从而及时有效的指导临床治疗,并为不孕症患者制定合适的时间,指导夫妻同房,提高受孕率。与此同时,观察组子宫内膜三线型人数占比显著低于对照组,而均质型人数占比显著高于对照组。这与张苗等人的研究报道相一致^[18],说明了三线型子宫内膜者更容易受孕。究其原因,我们认为阴道超声监测显示为均质型子宫内膜的患者,大部分体内雌激素水平过高,因此会严重影响胚胎种植;而三线型子宫内膜患者,其体内的雌激素水平相对正常,因此更容易受孕。此外,观察组排卵前卵泡直径与子宫内膜厚度均显著低于对照组。这符合陈小燕的研究报道^[19],说明了卵泡直径与子宫内膜厚度均与妊娠存在一定相关性。其中有研究报道认为正常妊娠所需内膜厚度应 ≥ 7 mm,而最合适的着床厚度为9~11 mm。因此,通过阴道超声监测可有效观察患者子宫内膜厚度,从而为临床治疗不孕症提供可靠的依据。另有研究报道表明,经引导超声监测不但可直观的监测卵泡生长发育全过程,而且还可及时发现并处理卵泡异常发育情况,从而有效减少促排卵过程中并发症的发生,在不孕症的诊断以及治疗上具有极其重要的价值^[20]。

综上所述,经阴道超声监测卵泡发育及子宫内膜厚度变化可对不孕症进行有效诊断,并为临床合理用药提供可靠的参考依据。

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