

轻度子宫内膜异位症腹腔液及血清中 SOD LPO VitE 的研究

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摘要 将 51 例经腹腔镜确诊的轻度子宫内膜异位症患者与 20 例行腹腔镜绝育术的正常妇女的腹腔液及血清中的脂质过氧化物(LPO)、超氧化物歧化酶(SOD)、维生素 E(VitE)水平进行分析,结果表明:轻度子宫内膜异位症患者腹腔液中的 LPO 明显高于正常对照组($P < 0.01$),腹腔液中的 SOD 明显高于正常对照组($P < 0.01$)。轻度内异症血清中的 SOD、LPO 与正常妇女比较无显著差异($P > 0.05$)。结论:这些变化考虑与局部异位的子宫内膜的病理变化有关,是导致不孕的重要因素之一。还探讨了子宫内膜异位症的局部抗氧化剂应用的临床价值

关键词 子宫内膜异位症 腹腔液 血清 氧自由基

为了探讨氧自由基与轻度子宫内膜异位症以及导致不孕的关系,我们对经腹腔镜确诊的轻度子宫内膜异位症患者及同期行腹腔镜绝育术的正常妇女的腹水及血清中脂质过氧化物(LPO)、过氧化物歧化酶(SOD)、维生素 E(VitE)水平进行研究分析,现介绍如下。

1 资料与方法

1.1 一般资料:选自山西医科大学附属二院的 1993 年 3 月~ 10 月间,经腹腔镜确诊的 51 例轻度子宫内膜异位症患者(均伴不孕)及同期行腹腔镜绝育术的同年年龄组的 20 例正常妇女为对照,年龄 24~ 36 岁,不孕年限 2~ 8 年,取标本均为月经的卵泡期。

1.2 方法:常规行腹腔镜术,在直视下确诊为轻度子宫内膜异位症后,立即抽取子宫膀胱凹陷及子宫直肠凹陷处所有腹腔液,测量容积后同时抽取静脉血 3ml,离心后放入 -20℃ 冰箱待测。检测药盒选自南京建成生物工程研究所生产的 LPO、SOD、VitE 测试盒,以 T22 光电比色测其含量,测量单位 LPO (pmol/L)、SOD (pU/L)、VitE (mg/L)。

1.3 诊断标准 按《妇产科学》第三版轻度子宫内膜异位症诊断标准,包括腹腔镜下诊断。

1.4 统计方法 所得数据采用均数比较经方差齐性检验后 t 检验。

2 结果

2.1 腹水及血清中 LPO 的变化 轻度子宫内膜异位症腹水中 LPO 均数为 (11.18 ± 6.21) pmol/L,正常妇女为 (3.10 ± 0.48) pmol/L,轻度子宫内膜异位症腹水中 LPO 明显高于正常对照组($P < 0.01$);轻度子宫内膜异位症血清中 LPO 均数为 (2.94 ± 2.17) pmol/L,正常妇女为 (3.44 ± 1.05) pmol/L,两者比较无显著差异($P > 0.05$)。

2.2 腹水及血清中 SOD 的变化 轻度子宫内膜异位

症腹水中 SOD 均数为 (30.82 ± 12.35) pU/L,正常妇女为 (152.93 ± 26.54) pU/L,两者比较 $P < 0.01$;轻度子宫内膜异位症血清中 SOD 均数为 (144.54 ± 58.65) pU/L,正常妇女为 (137.98 ± 14.14) pU/L,两者比较无显著差异($P > 0.05$)。

2.3 腹水及血清中 VitE 的变化 轻度子宫内膜异位症腹水中 VitE 均数为 (0.60 ± 0.37) mg/L,正常妇女为 (2.31 ± 0.94) mg/L;血清中轻度子宫内膜异位症 VitE 均数为 (1.62 ± 0.60) mg/L,正常妇女为 (2.54 ± 1.22) mg/L,腹水及血清中轻度子宫内膜异位症的 VitE 均明显低于对照组($P < 0.01$)。以上结果见表 1。

表 1 两组腹水及血清 LPO SOD VitE 水平变化($\bar{x} \pm s$)

组别	例数	腹水			血清		
		LPO (pmol/L)	SOD (PU/L)	VitE (mg/L)	LPO (pmol/L)	SOD (PU/L)	VitE (mg/L)
轻度内异症	51	11.18 ± 6.21	30.82 ± 12.35	0.60 ± 0.37	2.94 ± 2.17	144.54 ± 58.65	1.62 ± 0.60
正常妇女	20	3.10 ± 0.48	152.93 ± 26.54	2.31 ± 0.94	3.44 ± 1.05	137.98 ± 14.14	2.54 ± 1.22
P 值		< 0.01	< 0.01	< 0.01	> 0.05	> 0.05	< 0.01

3 讨论

3.1 从腹水中 LPO 的升高探讨轻度子宫内膜异位症与不孕的关系:氧是生物体内最重要的电子受体,在氧化代谢过程中 95% 还原为水,余下 5% 的氧则可生成多种氧化不全产物即氧自由基(OFR),这些 OFR 可以在吞噬细胞及中性粒细胞反应过程中产生,还可在金属离子促进下使还原形产物自动氧化而产生,其 OFR 性质极为活跃,当不能被体内抗氧化物完全清除时,将使组织细胞破坏,产生脂质过氧化反应,产生大量 LPO,导致组织的广泛损伤。本资料显示轻度子宫内膜异位症腹水中 LPO 明显增高,血清中变化不大,这提示 OFR 诱发的脂质过氧化反应参与了盆腔内子

宫内膜异位病灶的病理变化过程。Halmé 等曾提到子宫内膜异位症腹腔液的细胞成份中 82% ~ 98% 为巨噬细胞^[1], 这主要来源于外周血单核细胞外游所致, 大量的巨噬细胞在异位灶周围浸润, 释放出大量的 OFR^[2]。此外, 根据金属离子可促使过氧化氢生成 OFR 的机制, 可推测盆腔异位内膜中, 存在的含铁血黄素中的金属铁离子可能也是 OFR 生成的另一途径。这些具有高度活性和细胞毒性的 OFR, 通过病灶及周围组织细胞膜的脂质过氧化, 造成膜的破坏或通透性增加^[3], 如果累及细胞器可释放出各种水解酶。这一系列非细胞性的炎性反应, 使盆腔内环境即生殖内环境发生了物理及生化的改变, 包括病灶及周围组织的渗出、纤维素沉着、腹腔液容积及生化的改变, 将可能对卵子的发育、排卵, 精子的运动及精卵结合等方面产生一定的影响而导致不孕。

3.2 从轻度子宫内膜异位症抗氧化能力的减低探讨抗氧化剂应用的临床价值: 生物抗氧化系统是由多种抗氧化物质组成, 最重要的有 SOD、CAT (过氧化氢酶)、VitE 等几种自由基链式反应阻断剂, SOD、CAT 具有催化活性, 能清除过氧化物阴离子保护细胞免受损伤, 对机体的氧化与抗氧化平衡起着至关重要的作用。VitE 是生物体内唯一的脂溶性抗氧化剂, 在细胞脂质中起消除 OFR 的作用。本资料提示: 轻度子宫内

膜异位症腹水中 SOD、VitE (包括血清) 均明显低于正常组 ($P < 0.01$), 这可能是由于一系列 OFR 反应消耗了大量抗氧化物所致, 也不能除外轻度子宫内膜异位症患者本身抗氧化能力低下的可能。

目前许多实验证明, 应用抗氧化剂可以对抗 OFR 引起的疾病^[2], 本资料显示轻度子宫内膜异位症腹水中 SOD 明显低下, 而血中变化不大, 可以认为 SOD 的腹腔内用药将是轻度子宫内膜异位症一个可尝试的治疗方法, 可望可以阻断盆腔内 OFR 的系列反应, 纠正内环境变化, 缓解症状, 增加受孕机会。同时本资料也提示腹腔液及血清中 VitE 水平均低下, 这可推测 VitE 的腹腔及全身用药, 对轻度子宫内膜异位症导致的不孕具有一定的临床应用价值。

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外阴巨大蔓状血管瘤 1 例

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患者 40 岁, 住院号 9604067, 孕 1 产 1。右外阴肿物 5 年, 曾在外院先后两次行肿瘤切除术, 均未能控制。距第二次手术 9 个月, 于原部位又复发一鸭卵大肿物, 无痛及其它不适感。自觉肿物于月经期变软, 月经过后稍硬。妇科检查: 右侧大阴唇中部见鸭卵大肿物, 质地软, 无波动、红肿及压痛。内诊: 肿瘤基底部颇深, 似自右侧坐骨直肠窝至右侧大阴唇。子宫及附件均正常。B 超提示: 外阴实性肿物 (3.9cm × 5.4cm × 6.3cm), 轮廓较清, 内部回声不均匀, 深达盆腔 15cm, 宽约 7.6cm。

在硬膜外麻醉下行肿瘤切除术, 剥离至深处时出血较多, 钳夹止血困难, 以明胶海绵填塞, 局部贴敷“立止血”1 支, 静脉滴注 2 支, 血止, 术中出血约 600ml。切除之肿瘤质软, 呈粉灰色, 有韧性, 约 16cm × 6cm × 4cm, 切面呈蜂窝状。镜下见平滑肌组织中多量血管,* 肿瘤实验室

并有水肿改变, 管腔内见红细胞堆积。病理诊断(病理号 1317): 外阴蔓状血管瘤。切口甲级愈合。术后一年随访, 情况良好。

讨 论

血管瘤主要由血管内皮细胞构成, 是介于错构瘤性畸形和真性肿瘤之间的良性病变。蔓状血管瘤 (re-cemose hemangioma) 多见于成人, 以背部、臀部及大腿处多见, 而发生于外阴部的巨大蔓状血管瘤实属罕见。瘤体由较大的静脉和动脉构成, 其血管壁较厚, 结构往往异常不易看出是动脉还是静脉, 瘤内可见散在的平滑肌成份。

本例肿瘤位置较深, 术中术野小, 出血多钳夹止血困难, 术前应做好充分准备, 肿瘤切除要彻底, 以免术后复发。



ENGLISH ABSTRACTS OF ORIGINAL ARTICLES

Research on Mechanism of Infertility in Endometriosis Xiong Guangwu, Shi Changxu Department of Obstetrics and Gynecology, Southwest Hospital, Third Military Medical College, Chongqing, 630038

Objective: To investigate the mechanism of infertility of patients with pelvic mild endometriosis **Design:** The changes of prostaglandins (PG) and macrophages (M Φ) in peritoneal fluid, and pregnancy rate and dysmenorrhea improvement of infertile patients with pelvic mild endometriosis (EM) were observed after treatment by the Nd: YAG laser laparoscopy. **Results:** The number, size, phagocytic activity and acid phosphatase of M Φ and the concentrations of PG in peritoneal fluid of infertile patients with pelvic mild EM were significantly higher than those in the infertile controls. After treatment, pregnancy rate was 75%, dysmenorrhea disappeared in 93% of patients, and the number, size, phagocytic activity and acid phosphatase of M Φ and the concentrations of PG in peritoneal fluid were significantly decreased. However, the concentration of PG in peritoneal fluid before laser treatment were higher in pregnant patients than those in nonpregnant patients. **Conclusion:** The pelvic endometriotic lesions may produce a great deal of PG increasing the concentrations of PG in peritoneal fluid, and stimulate M Φ entering peritoneal cavity and be activated subsequently resulting in infertility and dysmenorrhea. The Nd: YAG laser laparoscopy treatment could decrease the number and activity of M Φ as well as the concentrations of PG in peritoneal fluid, thereby increasing the chance of pregnancy and improving dysmenorrhea, but the pregnancy rate would be influenced by other coexisting infertile factors and the period of infertility.

Key Words: Endometriosis The Nd: YAG Laser Laparoscopy Prostaglandin Macrophage Infertility

(Original article on page 339)

Analysis of treatments of refractory endometriosis with domestic luteinizing hormone-releasing hormone analogue Zhang Shaofen, Zhu Guanzhen

Obstetrics and Gynecology Hospital of Shanghai Medical University, 200011

Objective: To analyze the efficacy of medical treatment of refractory endometriosis **Design:** ten patients with refractory endometriosis were treated with LHRH-A (500 μ g/day in qd) or added back norethindrone (3, 125mg/day po qd) for 3-6 months **Results:** Satisfactory results have been achieved. All symptoms such as dysmenorrhea, dyspareunia, diarrhea and vaginal bleeding have disappeared quickly. The ovarian chocolate cysts and vaginal nodules have markedly decreased in size. The levels of IgA decreased significantly after the treatment. Low dose norethindrone have no adverse effects on liver, Kidney and lipid metabolism. **Conclusion:** It is probably the factors of the levels of decreased IgA that the activity of the ectopic endometrium has stopped and the inflammatory reaction has subsided. LHRH-A and low dose norethindrone "add-back" therapy not only have satisfactory effect but also overcome bone loss induced by low estrogen level, so that the method of therapy has practical prospect.

Key Words LHRH-A Norethindrone Endometriosis

(Original article on page 343)

Study on SOD, LPO and VitE levels in peritoneal fluid and plasma of patients with mild endometriosis Zhu yude, Wang Yuan, Yang Yansheng, et al The People's Hospital of Zhu Hai city, 519000

Objective: To study the super oxide divergenase (SOD), Lipid peroxidative (LPO) and VitE levels in peritoneal fluid (PF) as well as in plasma of the patients with mild endometriosis **Design:** The SOD, LPO and VitE levels in PF and plasma of 51 cases with mild endometriosis diagnosed by Laparoscopy were compared with those of 20 cases of normal women undergoing salpingoligation. **Results:** the LPO in PF of mild endometriosis patients was significantly higher ($P < 0.01$) and the SOD was significantly Lower ($P <$

0.01) than those of control group. The VitE concentration in PF and plasma of the patients was significantly lower than that of control group ($P < 0.01$). The SOD LPO levels in plasma had no difference ($P > 0.05$) between the patients and the normal control.

Conclusion: The PF changes is closely related to the local pathological change resulted from endometriosis and Local antioxidant therapy would be valuable to the endometriosis

Key Words: Endometriosis Peritoneal fluid Plasma Free radical

(Original article on page 345)

Measurement of cellular immunity functions in patients with endometriosis Li Jian, Wu Aihua The First Hospital in Longyan City Fujian. 364000

Objective: To investigate the relationship between the cellular immunity function and the endometriosis **Methods:** T-lymphocyte subsets were determined by the monoclonal antibodies (CD3, CD4, CD8, CD56) in 20 patients with endometriosis, 20 patients with myoma of uterus and 20 normal women. **Results:** The percentage of T₃/T₄ and the ration of T₄/T₈ of patients with endometriosis were significantly lower than those of normal women ($P < 0.01$). The percentage of T₈ was not significantly increased ($P > 0.05$). T₄, T₈ in endometriosis were lower than those in myoma of uterus T₃ was the same in both group, T₄/T₈ was slightly higher, T₃, T₄/T₈ in myoma of uterus were significantly lower than those in normal women ($P < 0.01$). T₄ was lower ($P > 0.05$), T₈ was significantly higher ($P < 0.05$). The percentage of NK cell was that of myoma of uterus > endometriosis > normal women, but the difference was not significant ($P > 0.05$). **Conclusions:** Cellular immunity function in patients with endometriosis is decreased

Key Words: Endometriosis T-lymphocyte subsets Myoma of uterus Natural killer cells

(Original article on page 347)

Perineal endometriosis: Clinical analysis of 20 cases Zhang Yunshan Tianjin Central Hospital of Obstetrics and Gynecology, Tianjin 300052

Objective: To investigate the symptoms and signs

of perineal endometriosis and the effect of treatment. Design 20 cases of perineal endometriosis diagnosed by history was retrospectively studied. **Results:** Eighteen patients had endometriosis at the site of episiotomy. The major Symptoms were pain and swelling at the episiotomy scar mass during menstruation and with dyspareunia in some patients. Two had perineal endometriosis at non-episiotomy sites, one at the site of perineal laceration and another at the posterior portion of left vaginal wall with small vaginal bleeding periodically. All but one were managed surgically. Follow-up discovered two recurrences. **Conclusion:** The symptoms and signs of perineal endometriosis may be diverse and the endometriosis focus should be excised.

Key words: Perineum Episiotomy Endometriosis

(Original article on page 349)

Diagnostic value for invasive mole by transvaginal color Doppler sonography Mu Junwu, Zhang Sizhen, Leixiaoying, et al Second Affiliated Hospital, Xian Medical University, 710004

Objective: To study the value of transvaginal color Doppler sonography (TVCD) in early diagnosis of the invasive mole. **Design:** Transvaginal color Doppler was used to examine the blood flow of uterine artery (UTA) and spiral artery (SA) in 19 invasive mole, 91 normal early pregnancy, 35 non-pregnant women and 13 hydatidiform mole were as control. The peak systolic velocity (PS), resistance index (RI), pulse index (PI) were calculated. **Results:** The blood flow was rich and blazing within myometrium of the invasive mole. The PS value of UTA and SA was higher ($P < 0.005$), the RI, PI value was lower ($P < 0.005$) than those of the control group. That the size of blood sinusoid was more than 5 mm was used as the criterion for diagnosis of the invasive mole. The sensitivity rate was 95% and specificity rate was 100%. **Conclusion:** The results showed that TVCD is an effective method to detect the invasive mole; the hemodynamic parameter and blood sinusoid have an important value for the early diagnosis.

Key words: color Doppler Sonography Transvaginal sonography Invasive mole

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