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· 临床研究 ·

抗苗勒管激素与不同表型多囊卵巢综合征发病特征的相关性分析

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【摘要】目的 探讨不同表型多囊卵巢综合征(polycystic ovary syndrome, PCOS)患者血清抗苗勒管激素(AMH)及性激素指标水平, 并评估 AMH 与这些指标的相关性。**方法** 应用 UNION 免疫分析仪和 UniCel DxI800 免疫分析系统检测 702 例 PCOS 患者和 118 例健康女性(对照组)AMH 和其他性激素水平, 并进行超声下窦卵泡计数(AFC)和卵巢体积测量。应用 Pearson 分析进行双变量相关分析。**结果** PCOS 患者的卵泡刺激素(FSH)低于对照组, 其中无排卵或稀发排卵(OA)+ 高雄激素血症(HA)+ 多囊卵巢(PCO)组与对照组间的差异具有统计学意义($P<0.05$)。黄体生成素(LH)、LH/FSH、AMH 均显著高于对照组。血清睾酮(T)水平在 OA+HA 组和 OA+HA+PCO 组显著升高。各组间泌乳素(PRL)、雌二醇(E_2)水平无明显差异。AMH 与 FSH 呈负相关, 与 LH、LH/FSH、T、AFC、左卵巢体积和右卵巢体积呈正相关。**结论** 血清 AMH 浓度可以反映窦卵泡的数目和血清 T 的浓度高低, 可作为 PCOS 诊断与监测指标之一, 提高 PCOS 诊断的简便性, 在临床上有广泛的应用前景。

【关键词】 抗苗勒管激素(AMH); 多囊卵巢综合征(PCOS); 窦卵泡计数(AFC); 高雄激素血症

· 临床研究 ·

Analysis of the characteristics and correlation of anti-Müllerian hormone in different phenotypic polycystic ovary syndrome

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【Abstract】 Objective To investigate the levels of serum anti-Müllerian hormone (AMH) and sex hormone in patients with different types of polycystic ovary syndrome (PCOS) and to evaluate the correlation between AMH and these indexes. **Methods** AMH and other sex hormone levels of 702 patients with PCOS and 118 healthy women (control group) were examined by UNION immunoassay and UniCel DxI800 immunoassay. Ultrasound was used to measure antral follicle count (AFC) and ovarian volume. Bivariate correlation analysis was performed by Pearson correlation analysis. **Results** The follicle-stimulating hormone (FSH) of PCOS patients was lower than that of the control, and the difference was partial statistically significant between oligo and/or anovulation (OA)+hyperandrogenism (HA)+polycystic ovaries (PCO) group and the control. The levels of luteinizing hormone (LH), LH/FSH, AMH were significantly higher than those in the control. Serum testosterone (T) level was significantly higher in OA+HA and OA+HA+PCO types of PCOS. There was no significant difference between prolactin (PRL) and estradiol (E_2) in each group. AMH was negatively correlated with FSH and positively correlated with LH, LH/FSH, T, AFC, left ovarian volume and right ovarian volume. **Conclusion** The serum AMH concentration can reflect the number of antral follicles and the concentration of serum T, which can be used as one of the diagnostic and monitoring indicators of PCOS, improve the simplicity of PCOS diagnosis, and has wide application prospect in clinic.

【Key words】 Anti-Müllerian hormone (AMH); Polycystic ovary syndrome (PCOS); Antral follicle count (AFC); Hyperandrogenism

· 临床研究 ·

肥胖型多囊卵巢综合征并发妊娠期高血压 / 子痫前期风险因素的研究

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【摘要】目的 探讨肥胖型多囊卵巢综合征(PCOS)患者并发妊娠期高血压 / 子痫前期(PIH/PE)的风险因素。**方法** 对 PCOS 合并不孕患者通过促排卵成功单胎妊娠的妇女进行前瞻性队列研究, 随访至产后 12 周。从孕前的临床体征评分、内分泌及代谢状态中筛选出 PCOS 并发 PIH/PE 的风险因素。**结果** 本研究共纳入促排卵受孕的 PCOS 患者 92 例, 其中肥胖型和非肥胖型分别为 38 例和 54 例, 并发 PIH/PE 分别为 11 例和 6 例, 发病率分别为 28.9% 和 11.1%($P<0.05$)。Logistic 回归多因素分析显示肥胖型 PCOS 患者并发 PIH/PE 的风险因素为血性激素结合球蛋白(SHBG)($OR=0.975$, $P<0.05$), 是唯一的独立风险因子; 受试者工作特征(ROC)曲线分析孕前 SHBG 和腰臀比(WHR)对肥胖型 PCOS 患 PIH/PE 的预测价值分别为 0.883 及 0.775(P 均 <0.05)。**结论** 肥胖型比非肥胖型 PCOS 患者更易并发 PIH/PE, 肥胖型 PCOS 患者孕前的低 SHBG、中心性肥胖都可能与孕期并发 PIH/PE 有关。

【关键词】 多囊卵巢综合征(PCOS); 妊娠期高血压(PIH); 子痫前期(PE); 性激素结合球蛋白(SHBG)

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· 临床研究 ·

Risk factors for gestational hypertension/preeclampsia in obese women with polycystic ovary syndrome

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【Abstract】 Objective To explore preconception risk factors for pregnancy-induced hypertension/preeclampsia (PIH/PE) in obese women with polycystic ovary syndrome (PCOS). **Methods** A prospective cohort study was conducted in infertile Chinese women with PCOS who had a singleton pregnancy by ovulation induction and were followed up for 12 weeks after delivery. The patients underwent assessment of physical, endocrine, and metabolic features before ovulation induction. **Results** Eleven obese (28.9%) and 6 non-obese (11.1%) PCOS patients were diagnosed with PIH/PE, respectively (both $P<0.05$). Logistic regression analysis showed that preconception sex hormone-binding globulin (SHBG) was the only independent risk factor for PIH/PE ($OR=0.975$, $P<0.05$). Receiver operator characteristic (ROC) analysis indicated that the risk value of pre-pregnancy SHBG and waist-hip ratio (WHR) was 0.883 and 0.775, respectively. **Conclusion** Obese PCOS women were apt to suffer PIH/PE. Preconception low SHBG levels and central obesity might be correlated with the subsequent development of preeclampsia in obese patients with PCOS.

【Key words】 Polycystic ovary syndrome (PCOS); Pregnancy-induced hypertension (PIH); Preeclampsia (PE); Sex hormone-binding globulin (SHBG)

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· 临床研究 ·

早孕期口服地屈孕酮与新鲜周期辅助生殖单胎孕妇产前发生的关联性

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【摘要】目的 探究早孕期口服地屈孕酮与新鲜周期辅助生殖单胎孕妇产前发病的关联性。**方法** 收集 2008 年 1 月—2016 年 6 月接受胚胎移植新鲜周期辅助生殖且本院分娩的 756 例单胎孕妇产前病例资料进行回顾性队列研究。按照早孕期孕激素黄体支持是否加用地屈孕酮, 分为地屈孕酮组(黄体酮/雪诺酮+地屈孕酮)196 例和对照组(黄体酮/雪诺酮)560 例, 比较组间孕妇产前发病的发病率。采用 Logistic 回归分析, 探究地屈孕酮与子痫前期发生的关联关系。**结果** 地屈孕酮组子痫前期发病率(1.0%)低于对照组(4.5%, $P=0.025$)。地屈孕酮组配偶年龄 ≥ 40 岁、孕妇合并症的比例均高于对照组(P 值分别为 0.037、0.048)。将地屈孕酮、配偶年龄及孕妇合并症纳入 Logistic 回归分析。多因素分析显示仅地屈孕酮和子痫前期有统计学意义的关联($OR=0.221$, 95% $CI=0.052\sim 0.940$, $P=0.041$)。**结论** 早孕期口服地屈孕酮是新鲜周期辅助生殖孕妇产前发生的保护因素。

【关键词】 地屈孕酮; 子痫前期; 新鲜周期; 辅助生殖

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· 临床研究 ·

Correlation between taking dydrogesterone in the first trimester and preeclampsia in singleton pregnancy following fresh cycle assisted reproduction

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【Abstract】Objective To investigate the correlation between taking dydrogesterone in the first trimester and preeclampsia in singleton pregnancy following fresh cycle assisted reproduction. **Methods** A retrospective cohort study was conducted on the 756 cases of singleton pregnancy who received fresh cycle assisted reproduction and delivered in our hospital from January 2008 to June 2016. According to the usage of dydrogesterone, the patients were divided into the dydrogesterone group (progesterone/progesterone vaginal gel and dydrogesterone) of 196 cases and control group (progesterone/progesterone vaginal gel) of 560 cases. The incidence of preeclampsia in two groups was compared. The Logistic regression analysis was used to investigate the correlation between taking dydrogesterone in the first trimester and preeclampsia. **Results** The incidence of preeclampsia was significantly lower in the dydrogesterone group (1.0%) than that in control group (4.5%, $P=0.025$). Both the spouses aged more than forty years and the gravids with complications were more in the dydrogesterone group compared with control group ($P=0.037$, $P=0.048$). The multivariate analysis showed that taking dydrogesterone in the first trimester was correlated with preeclampsia ($OR=0.221$, 95% $CI=0.052\sim0.940$, $P=0.041$). **Conclusion** Taking dydrogesterone in the first trimester was a protective factor for preeclampsia in singleton pregnancy following fresh cycle assisted reproduction.

【Key words】 Dydrogesterone; Preeclampsia; Fresh cycle; Assisted reproduction

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· 临床研究 ·

冻融胚胎移植周期无创性内膜刺激胚胎移植策略的临床疗效探究

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【摘要】目的 探讨无创性内膜刺激胚胎移植(stimulation of endometrium embryo transfer, SEET)技术在冻融胚胎移植(frozen-thawed embryo transfer, FET)周期中对妊娠结局的影响。**方法** 回顾性分析 2016 年 3 月—2017 年 2 月在本中心进行体外受精-胚胎移植(IVF-ET)并首次行单囊胚 FET 的不孕症患者的临床资料, 按移植方式分组: A 组(实验组)57 个周期, FET 时采用 SEET 技术; B 组(对照组) 56 个周期, FET 时采用传统囊胚移植技术。**结果** A 组采用 SEET 技术后的胚胎种植率(64.9%)和临床妊娠率(64.9%)显著高于 B 组(44.6%, 44.6%)。**结论** SEET 技术可以显著提高临床妊娠率, 为改善 IVF 结局提供了一种新的移植策略。

【关键词】 无创内膜刺激胚胎移植(SEET); 冻融胚胎移植(FET); 临床妊娠率

· 临床研究 ·

Pregnancy outcomes following non-invasive stimulation of endometrium embryo transfer in the frozen-thawed embryo transfer cycles

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【Abstract】 Objective To study the effect of non-invasive stimulation of endometrium embryo transfer (SEET) on pregnancy outcome in the frozen-thawed embryo transfer (FET) cycles. **Methods** Retrospective analysis was performed in the patients with their first *in vitro* fertilization (IVF) and FET cycle in our reproductive medicine center from March 2016 to February 2017. All the patients were undergoing single FET, and based on the procedure of transfer, they were divided into two categories: group A (SEET group) included 57 cycles, which used SEET during FET; group B (control group) included 56 cycles, which used conventional blastocyst transfer during FET. **Results** The implantation rate and clinical pregnancy rate in the SEET group (64.9%, 64.9%) were statistically significantly higher than those in control group (44.6%, 44.6%). **Conclusion** During FET cycles, SEET could increase the clinical pregnancy rate, which may provide a new strategy of embryo transfer for IVF outcome improvement.

【Key words】 Non-invasive stimulation of endometrium embryo transfer (SEET); Frozen-thawed embryo transfer (FET); Clinical pregnancy rate

· 临床研究 ·

黄体期使用生长激素在高龄卵巢储备功能减退患者中的临床应用

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【摘要】目的 探讨黄体期使用生长激素(GH)对高龄卵巢储备功能减退(DOR)患者超促排卵治疗的影响。**方法** 选择接受体外受精/卵胞质内单精子显微注射-胚胎移植(IVF/ICSI-ET)且高龄(年龄 ≥ 35 岁)DOR不孕患者 156 例为研究对象, 均采用拮抗剂方案, 分为研究组(加用 GH)和对照组(不加用 GH)。分析 GH 对促性腺激素(Gn)使用总量、Gn 使用时间、获卵数、移植前内膜厚度、双原核(2PN)率、优质胚胎率、着床率的影响。**结果** Gn 使用时间、Gn 使用总量、移植前内膜厚度组间有统计学差异($P<0.05$)。hCG 注射日 E_2 水平、获卵数、2PN 受精率、优质胚胎率、着床率、临床妊娠率及累积妊娠率组间无统计学差异($P>0.05$)。研究组临床妊娠率为 28.0%、对照组为 19.4%, 研究组累积妊娠率为 33.3%、对照组为 20.0%, 组间均无统计学差异($P>0.05$), 但研究组临床妊娠率及累积妊娠率有上升趋势。**结论** GH 对年龄 ≥ 35 岁 DOR 患者可明显降低 Gn 的使用总量及使用时间, 增加子宫内膜的厚度, 临床妊娠率及累积妊娠率有提高的趋势。

【关键词】 生长激素(GH); 卵巢储备功能减退(DOR); 拮抗剂; 黄体期

· 临床研究 ·

Clinical application of growth hormone during luteal phase of the elderly patients with diminished ovarian reserve

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【Abstract】Objective To investigate the effect of growth hormone (GH) on the ovulation therapy during luteal phase of the elderly patients with diminished ovarian reserve (DOR). **Methods** Totally 156 DOR infertility patients aged ≥ 35 years who suffered *in vitro* fertilization/intracytoplasmic sperm injection-embryo transfer (IVF/ICSI-ET) were included in the study. They were divided into study group (utilizing GH) and control group (without GH used). The duration and dosage of gonadotropin (Gn) used, the number of oocytes retrieved, endometrial thickness before transplantation, two pronucleus (2PN) fertilization rate, good-quality embryo rate and implantation rate, clinical pregnancy rate and cumulative pregnancy rate were compared between the two groups. **Results** There were statistically significant differences in the duration and total dosage of Gn used, endometrial thickness before transplantation between the two groups ($P < 0.05$). There was no significant difference in E_2 level, the number of oocytes retrieved, 2PN fertilization rate, good-quality embryo rate, implantation rate, clinical pregnancy rate and cumulative pregnancy rate ($P > 0.05$). The clinical pregnancy rate was 28.0% in study group and 19.4% in the control. The cumulative pregnancy rate was 33.3% in study group and 20.0% in the control. There was no significant difference between the two groups ($P > 0.05$), but the clinical pregnancy rate and cumulative pregnancy rate had an upward trend. **Conclusion** GH can significantly reduce the duration and dosage of Gn used in DOR patients aged ≥ 35 years old and increase endometrial thickness. Clinical pregnancy rate and cumulative pregnancy rate in GH used group has an improvement trend.

【Key words】 Growth hormone (GH); Diminished ovarian reserve (DOR); Antagonist protocol; Luteal phase

· 临床研究 ·

二维超声在产后女性前腔室结构变化研究中的价值

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【摘要】目的 运用二维超声评估产后女性在静息状态下前腔室结构的变化。**方法** 收集顺产、剖宫产的产后患者共 45 例, 作为产后组, 运用二维超声评估静息状态下前腔室结构的变化, 并与 30 例未育、无盆底功能障碍女性(对照组)的超声检查结果进行对比。**结果** 静息状态下, 产后组与对照组逼尿肌厚度、尿道内口漏斗形成率及膀胱后角大小差异无统计学意义($P>0.05$)。产后组尿道倾斜角度 $[(30.12 \pm 0.86)^\circ]$ 大于对照组 $[(18.89 \pm 0.40)^\circ]$, 膀胱颈位置 $[(26.75 \pm 0.32) \text{ mm}]$ 低于对照组 $[(29.67 \pm 0.91) \text{ mm}]$, 差异有统计学意义($P<0.05$)。顺产组与剖宫产组各项指标差异均无统计学意义($P>0.05$)。**结论** 二维超声可初步了解分娩对女性前腔室结构的影响, 但所能提供的信息有限。

【关键词】 超声; 分娩; 前腔室

· 临床研究 ·

Value of two-dimensional ultrasound in the changes of anterior compartment structure in postpartum female pelvic cavity He Ping, Chen Ping, Hong Xiangli

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【Abstract】 Objective To evaluate the changes of anterior compartment structure of postpartum female pelvic cavity by two dimensional ultrasound. **Methods** Forty-five cases of postpartum women (postpartum group) and 30 nulliparous women without pelvic floor dysfunction (control group) were analyzed by two-dimensional ultrasound. **Results** There were no significant differences in the thickness of the bladder wall, urethral mouth funnel formation and integrality of retrovesical angle between postpartum group [(30.12 ± 0.86)°, (26.75 ± 0.32) mm] and control group [(18.89 ± 0.40)°, (29.67 ± 0.91) mm] ($P>0.05$). Urethra deflective angle was bigger and bladder neck position was lower in postpartum group than in control group ($P<0.05$). There were no significant differences in all the indices between vaginal primiparous group and cesarean primiparous group ($P>0.05$). **Conclusion** Two-dimensional ultrasound can find the changes of anterior compartment structure after childbirth preliminary, but the information is limited.

【Key words】 Ultrasonography; Delivery; Anterior compartment

· 临床研究 ·

男性因素对体外受精 - 胚胎移植妊娠结局的影响

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【摘要】目的 探讨男性因素对体外受精 - 胚胎移植(IVF-ET)妊娠结局的影响。**方法** 回顾性分析首次行 IVF-ET 的新鲜移植周期, 共 2 806 例, 对不同妊娠结局组的男性因素进行比较, 并运用 Logistic 回归方程分析各种男性因素对 IVF-ET 妊娠结局的影响。**结果** 妊娠组的男性年龄 $[(32.5 \pm 4.3)$ 岁]小于未妊娠组 $[(32.9 \pm 4.4)$ 岁], 活产组的男性年龄 $[(32.4 \pm 4.3)$ 岁]和卵泡刺激素(FSH) $[(5.3 \pm 2.5)$ IU/L]均小于未活产组 $[(33.0 \pm 4.4)$ 岁, (5.5 ± 2.6) IU/L], 流产组的男性年龄 $[(33.5 \pm 4.3)$ 岁]、FSH $[(5.9 \pm 3.0)$ IU/L]和体质量指数(BMI) $[(24.1 \pm 3.5)$ kg/m²]均大于未流产组 $[(32.4 \pm 4.3)$ 岁, (5.3 ± 2.5) IU/L, (23.5 ± 3.3) kg/m²], 差异有统计学意义($P < 0.05$); 经多因素回归分析, 通过控制女方因素的影响后, 未见所研究男性因素对 IVF 的妊娠结局有影响($P > 0.05$)。**结论** 男性因素协同女性因素共同影响 IVF-ET 的妊娠结局, 男性高龄、高 FSH、高 BMI 者的妊娠和活产机会可能较低, 流产率可能较高。

【关键词】 男性因素; 妊娠结局; 体外受精 - 胚胎移植(IVF-ET)

· 临床研究 ·

Effect of male factors on pregnancy outcomes of *in vitro* fertilization-embryo transfer Guan Shaogen,

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【Abstract】 Objective To investigate the effect of male's factors on the pregnancy outcomes of *in vitro* fertilization-embryo transfer (IVF-ET). **Methods** A total of 2 806 IVF cycles were retrospectively analyzed. The male factors in different pregnancy outcomes groups were compared, and the effects of male factors on pregnancy outcomes were analyzed by binary Logistic regression. **Results** Male age in pregnancy group [(32.5 ± 4.3) years] was younger than that in non-pregnancy group [(32.9 ± 4.4) years]; male age [(32.4 ± 4.3) years] and follicle-stimulating hormone (FSH) level [(5.3 ± 2.5) IU/L] in live birth group were smaller than those of non live birth group [(33.0 ± 4.4) years, (5.5 ± 2.6) IU/L]; male age [(33.5 ± 4.3) years, FSH level [(5.9 ± 3.0) IU/L] and body mass index (BMI) [(24.1 ± 3.5) kg/m²] in spontaneous abortion group were higher than those of non spontaneous abortion group [(32.4 ± 4.3) years, (5.3 ± 2.5) IU/L, (23.5 ± 3.3) kg/m²], there were statistical significances ($P < 0.05$). In adjusted models of binary Logistic regression, after control the woman factors, the male factors had no effect on the pregnancy outcome of IVF-ET ($P > 0.05$). **Conclusion** Male factors, together with female factors, influence the pregnancy outcome of IVF-ET. When men with elder age, higher FSH level and BMI, the clinical pregnancy and live birth opportunities may be lower and miscarriage may be increased.

【Key words】 Male factors; Pregnancy outcomes; *In vitro* fertilization-embryo transfer (IVF-ET)

· 临床研究 ·

输精管结扎与迟发性性腺功能减退症的关系

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【摘要】目的 评价输精管结扎对 ≥ 40 岁男性老年男性症状量表(the aging males' symptoms scale, AMS)评分的影响。**方法** 采用分层整群抽样的方法随机抽取 ≥ 40 岁男性为调查对象, 结合问卷调查以及体格检查的结果, 分析输精管结扎对健康相关生活质量和症状(AMS)评分的影响。**结果** 输精管结扎组 AMS 评分(38.7 ± 10.8)及迟发性性腺功能减退症(LOH)症状阳性率(90.8%)均高于非结扎组(31.3 ± 10.0 , 64.0%), 差异有统计学意义($P < 0.05$); 校正混杂因素后, 结扎组与非结扎组之间的躯体症状($\beta = 2.325$, 95% $CI = 1.29 \sim 3.36$)、心理症状($\beta = 0.805$, 95% $CI = 0.09 \sim 1.52$)、性功能症状($\beta = 2.693$, 95% $CI = 1.97 \sim 3.42$)及 AMS 总评分($\beta = 5.809$, 95% $CI = 3.86 \sim 7.76$)的差异均有统计学意义($P < 0.05$); 结扎 10 年组的性功能症状评分(12.1 ± 4.9)高于同年龄的对照(9.5 ± 3.7)($P < 0.05$); 结扎 20 年组的躯体症状评分(15.2 ± 5.5)、性功能症状评分(13.8 ± 3.9)以及 AMS 总评分(37.6 ± 9.9)高于同年龄的对照(13.2 ± 4.8 , 10.8 ± 4.1 , 31.7 ± 9.9)($P < 0.05$); 结扎 30 年组的躯体症状评分(16.8 ± 6.3)、心理症状评分(8.9 ± 4.1)、性功能症状评分(14.6 ± 3.5)以及 AMS 总评分(40.3 ± 11.0)亦高于同年龄的对照(13.5 ± 4.8 , 7.7 ± 3.3 , 11.1 ± 4.2 , 32.3 ± 10.0)($P < 0.05$)。**结论** 输精管结扎可能会导致 AMS 评分升高, 且在输精管结扎年限长的人群中尤其明显。

【关键词】 输精管结扎术; 老年男性症状量表(AMS); 迟发性性腺功能减退症(LOH)

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· 临床研究 ·

Relationship of vasectomy with late-onset hypogonadism

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【Abstract】 Objective To investigate the impact of vasectomy on the aging males' symptoms (AMS) score. **Methods** Participants aged ≥ 40 years were randomly sampled by stratified-cluster method. A questionnaire and a physical examination were taken for each one, and combining both results to analyze the impact of vasectomy on AMS score. **Results** The positive rate of AMS symptom and the AMS score in the ligation group (38.7 ± 10.8) was higher than the non-ligation group (31.3 ± 10.0) ($P < 0.05$). After adjusted by possible confounding factors, the statistically significant ($P < 0.05$) difference was found in somatic symptoms ($\beta = 2.235$, 95% $CI = 1.29 - 3.36$), psychological symptoms ($\beta = 0.805$, 95% $CI = 0.09 - 1.52$), sexual functional symptoms ($\beta = 2.693$, 95% $CI = 1.97 - 3.42$) and total score of AMS ($\beta = 5.809$, 95% $CI = 3.86 - 7.76$), all grouped by ligation. The score of sexual function in the 10-year ligation group was higher than control group with the same age ($P < 0.05$). The scores of somatic symptoms, sexual symptom and AMS were higher than control group with the same age ($P < 0.05$). The scores of somatic symptoms (15.2 ± 5.5 , 16.8 ± 6.3), sexual symptom (13.8 ± 3.9 , 14.6 ± 3.5) and AMS (37.6 ± 9.9 , 40.3 ± 11.0) in the 20-year and 30-year ligation group were higher than control group (13.2 ± 4.8 , 13.5 ± 4.8), (10.8 ± 4.1 , 11.1 ± 4.2), (31.7 ± 9.9 , 32.3 ± 10.0) with the same age ($P < 0.05$). The scores of psychological symptoms (8.9 ± 4.1) was higher in the 30-year group than control group (7.7 ± 3.3) with the same age ($P < 0.05$). The scores of somatic symptoms, psychological symptoms, sexual function and AMS were higher in the 30-year group than control group with the same age ($P < 0.05$). **Conclusion** The vasectomy may increase AMS score, especially distinct in the participants with long-term vasectomy.

【Key words】 Vasectomy; Aging males' symptoms scale (AMS); Late-onset hypogonadism (LOH)

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· 实验研究 ·

调节性 T 细胞和 Notch1 信号通路在原因不明 复发性自然流产中的作用

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【摘要】目的 探讨调节性 T 细胞(Treg)和 Notch1 信号通路在原因不明复发性自然流产(URSA)中的作用。**方法** 流式细胞仪检测 URSA 患者(URSA 组)及正常妊娠妇女(对照组)蜕膜 CD4⁺CD25⁺T 细胞 Treg 表达比例, real time RT-PCR 及 Western blotting 检测蜕膜中 CD4⁺T 细胞中 Notch1 信号通路和叉头转录因子家族 3(Foxp3)表达情况。**结果** URSA 组 CD4⁺CD25⁺T 细胞 / 淋巴细胞、CD4⁺Foxp3⁺T 细胞 / 淋巴细胞和 CD4⁺Foxp3⁺T 细胞 / CD4⁺T 细胞比例均低于对照组($P < 0.05$)。URSA 组 CD4⁺T 细胞中 *Notch1-Ic*、*RBP-Jκ*、*Foxp3* mRNA 及蛋白表达均低于对照组。**结论** URSA 患者蜕膜 CD4⁺T 细胞中 Notch1 信号通路和 Foxp3 表达下调, CD4⁺CD25⁺T 细胞表达比例下降, 提示 URSA 患者 Notch1 信号通路和 Foxp3 表达下调可能阻碍 CD4⁺T 细胞转化为 CD4⁺CD25⁺T 细胞, 进而诱发免疫排斥, 诱导流产。

【关键词】 原因不明复发性自然流产(URSA); 调节性 T 细胞(Treg); Notch1 信号通路

· 实验研究 ·

Role of regulatory T cells and Notch1 signaling pathway in unexplained recurrent spontaneous abortion

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【Abstract】 Objective To study the role of regulatory T cells (Treg) and Notch1 signaling pathway in unexplained recurrent spontaneous abortion (URSA). **Methods** The proportion of CD4⁺CD25⁺T cells expression in decidua of URSA group and normal pregnancy group (control group) were analyzed by flow cytometry separately. The expression of Notch1 signaling pathway and Foxp3 in decidua were detected by real time RT-PCR and Western blotting. **Results** In the decidua of URSA group, the proportion of CD4⁺CD25⁺T cells/lymphocyte, CD4⁺Foxp3⁺T cells/lymphocyte and CD4⁺Foxp3⁺T cells/CD4⁺T cells were all decreased compared with control group. The mRNA and protein of Notch1-Ic, RBP-J κ and Foxp3 in CD4⁺T cells were detected decreased significantly in URSA group than control group ($P<0.05$). **Conclusion** In the decidua of URSA group, CD4⁺T cells were detected down expression of Notch1 signaling pathway and Foxp3, low proportion of CD4⁺CD25⁺T cells. Those results indicated that the reduced expression of Notch1 signaling pathway and Foxp3 in URSA patients may block the progress of CD4⁺T cells transforming to CD4⁺CD25⁺T cells, then induce immunological rejection and abortion.

【Key words】 Unexplained recurrent spontaneous abortion (URSA); Regulatory T cells (Treg); Notch1 signaling pathway

· 实验研究 ·

前列腺素 E2 通过环磷酸腺苷 - 蛋白激酶 A 信号通路上调人 THP-1 巨噬细胞血管内皮生成因子表达并促进体外血管生成

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【摘要】目的 探讨前列腺素 E2(prostaglandin E2, PGE2)是否上调人 THP-1 巨噬细胞血管内皮生长因子(vascular endothelial growth factor, VEGF)表达及其促进体外血管生成的分子机制。**方法** 用不同浓度 PGE2、2 种 PGE2 受体(EP2 和 EP4)拮抗剂或环磷酸腺苷 - 蛋白激酶 A(cAMP-PKA)通路特异性抑制剂 SQ22536、H89 处理人 THP-1 巨噬细胞, Western blotting 检测人 THP-1 巨噬细胞内 VEGF 蛋白表达的变化, Transwell 小室和 Matrigel 胶实验分析 PGE2 对人 THP-1 巨噬细胞促进人脐静脉血管内皮细胞(HUVECs)迁移和成管的影响。**结果** PGE2 通过 EP2 受体激活 cAMP-PKA 通路, 上调人 THP-1 巨噬细胞 VEGF 蛋白表达, 以及促进 HUVECs 的迁移和成管效应。**结论** PGE2 可能通过上调人 THP-1 源巨噬细胞 VEGF 的表达, 并且促进血管生成, 对胚胎着床起保护作用。

【关键词】 前列腺 E2(PGE2); 人 THP-1 巨噬细胞; 血管内皮生长因子(VEGF); 环磷酸腺苷 - 蛋白激酶 A(cAMP-PKA)通路

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· 实验研究 ·

Prostaglandin E2 (PGE2) upregulates vascular endothelial growth factor (VEGF) expressions in THP-1 derived macrophages via cAMP/PKA signaling pathway and promotes *in vitro* angiogenesis

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【Abstract】Objective To explore the possible molecular mechanism of prostaglandin E2 (PGE2) in regulating vascular endothelial growth factor (VEGF) expression in THP-1 macrophages. To analyze whether the media from PGE2-treated THP-1 derived macrophages improves angiogenesis of human umbilical vein endothelial cells (HUVECs) *in vitro*. **Methods** THP-1 derived macrophages were treated with PGE2, and PGE2 combined with EP2 receptor antagonist AH6809, EP4 receptor antagonist AH23848, adenylyl cyclase inhibitor SQ22536 and PKA inhibitor H89 respectively. Western blotting was used to examine the protein level of VEGF in THP-1 macrophages. Conditioned supernatants were obtained to stimulate HUVECs, migration and tube formation ability of the HUVECs were assessed. **Results** PGE2 upregulated the expression of VEGF in THP-1 derived macrophages through EP2 receptor and cAMP-PKA signaling pathway, and induced migration and accelerated the growth of tube like structures of HUVECs. **Conclusion** PGE2 may play a protective role in embryo implantation by promoting VEGF synthesis and improving angiogenesis.

【Key words】 Prostaglandin E2 (PGE2); THP-1 derived macrophages; Vascular endothelial growth factor (VEGF); cAMP-PKA pathways

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· 流行病学研究 ·

对围绝经期妇女激素补充治疗的认知度调查

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【摘要】目的 探讨医护人员和妇女主任对激素补充治疗(HRT)的知晓率及培训需求情况。**方法** 采用自行设计的调查问卷, 对桐乡市医护人员和妇女主任进行问卷调查, 调查表的主要内容分为一般情况、对HRT的利弊认知度、推荐与否、培训需求等方面。**结果** 共调查医护人员430人、妇女主任206人, 两组人员在平均年龄、工作年限、文化程度等基本特征方面无统计学差异。68.9%的妇女主任认为围绝经期妇女有必要应用HRT, 明显高于医护人员。只有8.6%的医护人员表示一定会推荐患者使用HRT, 明显低于妇女主任。医护人员不推荐使用HRT的原因主要是对副作用的担心。医务人员组更倾向于从相关书籍、期刊获得信息, 而妇女主任组更倾向于从医生及媒体获得相关信息。**结论** 桐乡市部分医护人员对HRT的相关知识了解不够, 担心HRT发生不良反应, HRT的推荐率低。医护人员和妇女主任在HRT的认知上存在差异。针对不同人群, 开展形式多样的HRT知识宣教及培养妇女主任成为HRT知识的传播者是提高HRT应用的关键措施。

【关键词】 激素补充治疗(HRT); 知晓率; 培训需求; 医护人员; 妇女主任

基金项目: 浙江省教育厅科研项目(Y201534797)

· 流行病学研究 ·

Investigation on awareness of perimenopausal hormone replacement therapy Zhu Lianhong, Ma Linjuan,

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【Abstract】Objective To study the awareness and training demands of perimenopausal hormone replacement therapy (HRT) among a part of the medical care personnel and all the village woman representatives in Tongxiang.

Methods A survey was conducted among the medical care personnel and all the village woman representatives in Tongxiang using questionnaire which is about the baseline characteristics of the two groups and the level of understanding, recommendation and training demand for knowledge regarding hormone replacement therapy (HRT). **Results** The survey involved 430 medical staff members and 206 village women representatives. No significantly statistical differences were found among the age, working lifetime and academic careers in the two groups. About 68.9% village woman representatives thought that the HRT was necessary to perimenopausal women which was significantly higher than the medical personnel. Only 8.6% of the medical personnel were willing to recommend HRT which was significantly lower than the village women representatives. The reason why the medical care personnel would not like to recommend HRT to patients was worrying about side effects. The medical personnel would like more perimenopausal health knowledge and information mainly through medical books and journals yet the village women representatives mainly through doctors and media. **Conclusion** The knowledge of HRT in part of the medical care personnel is not sufficient in Tongxiang. The side effects of HRT was still a concern. The recommending rate of HRT was low. There were differences between the medical care personnel and the village woman representatives in HRT knowledge. Therefore carrying out various forms of HRT knowledge education for different groups and training the village women representatives to become a disseminator of HRT knowledge are the key measures to improve HRT application.

【Key words】 Hormone replacement therapy (HRT); Awareness; Training demand; The medical personnel; The village woman representatives

Fund program: Scientific Research Fund of Zhejiang Education Department (Y201534797)

· 临床报道 ·

多胎减胎后单胎分娩与单胎妊娠分娩比较分析

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【摘要】目的 探讨体外受精-胚胎移植(IVF-ET)助孕单胎分娩者中, 孕早期多胎妊娠自然减胎及手术减胎对围产期母婴结局的影响。**方法** 回顾性分析 3 376 例行 IVF 助孕治疗, 新鲜或冷冻胚胎移植后单胎分娩者的临床资料, 根据孕早期宫内孕囊数分组: A 组(多胎妊娠, 455 例), 其中 A1 组(手术减胎, 34 例), A2 组(自然减胎, 421 例); B 组(单胎妊娠, 2 921 例); 分年龄进行组间临床基本资料, 出生低体重儿率、新生儿畸形率、妊娠期并发症等围产期母婴结局的比较。**结果** ①<35 岁的患者中, A 组比 B 组不孕时间短、移植胚胎数多和优质胚胎数多; ②囊胚移植比例、冷冻胚胎移植比例 A、B 组间均无统计学差异; ③ A1 组和 A2 组出生低体重儿率、出生极低体重儿率、胎儿畸形率均显著高于 B 组 ($P<0.05$), 但 A1、A2 组间无统计学差异 ($P>0.05$), A2 组早产率明显增加, 与 B 组有统计学差异 ($P<0.01$)。**结论** 多胎妊娠即使减胎后单胎分娩, 其新生儿低体重及畸形风险仍高于单胎妊娠分娩者, <35 岁、不孕时间短者, 建议选择单优质胚胎移植, 以降低多胎妊娠。

【关键词】 体外受精-胚胎移植; 多胎妊娠; 自然减胎; 手术减胎; 早产

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• 临床报道 •

Comparative analysis of originally singleton and singleton delivery for survivors of the multiple pregnancy

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【Abstract】 Objective To compare the maternal and neonatal outcomes between original singletons and singletons survived from multiple pregnancy in *in vitro* fertilization and embryo transfer (IVF- ET) cycle. **Methods** A total of 3 376 cases of single birth by IVF/ (fresh embryo or frozen-thawed embryo transfer) were retrospectively analyzed. The patients were divided into two groups: group A (survivors of the multiple pregnancy, 455 cycles) and group B (originally singleton 2 921 cycles). Group A were divided into two groups: group A1 (surgical reduction, 34 cycles) and group A2 (spontaneous reduction, 421 cycles). Rates of low birth weight, very low birth weight, neonatal malformation and pregnancy complications were compared and analyzed among the three groups. **Results** 1) There were significant differences in infertility duration, number of embryo transferred, embryo quality between group A and group B in patients less than 35 years old. 2) There was no significant difference between group A and group B in blastocyst transfer rate and frozen-thawed embryo transfer rate. 3) Group A1 and group A2 showed higher rate of low birth weight, very low birth weight, neonatal malformation when compared with group B, but there was no significant difference between group A1 and group A2. In group A2, the proportion of preterm delivery was higher than that in group B ($P<0.001$). **Conclusion** One prime embryo transfer is recommended for patients under 35 years old to reduce the risk of multiple pregnancy and adverse pregnancy outcomes.

【Key words】 *In vitro* fertilization and embryo transfer (IVF- ET); Multiple pregnancy; Spontaneous reduction; Surgical reduction; Preterm birth

· 临床报道 ·

宫颈管内与宫腔内供精人工授精妊娠结局的比较

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【摘要】目的 比较分析宫颈管内和宫腔内供精人工授精(AID)妊娠结局的影响。**方法** 对 548 个 AID 治疗周期进行回顾性分析, 其中宫颈管内人工授精(ICI)200 例 360 个周期, 宫腔内人工授精(IUI)125 例 188 个周期, 对 2 种授精部位的 AID 妊娠结局进行比较。**结果** ICI 组的周期妊娠率为 14.74%(51/346), 其中自然周期妊娠率为 18.54%(33/178), 促排卵周期妊娠率为 10.71%(18/168), 流产率为 11.76%(6/51); IUI 组的周期妊娠率为 28.49%(51/179), 其中自然周期的妊娠率为 32.04%(33/103), 促排卵周期妊娠率为 23.68%(18/76), 流产率为 5.88%(3/51); 组间差异均有统计学意义($P<0.05$)。**结论** 授精部位可能是影响 AID 成功妊娠的关键因素之一, 采用 IUI 法可能会提高 AID 的妊娠率。

【关键词】 宫腔内供精人工授精(AID); 宫腔内人工授精(IUI); 宫颈管内人工授精(ICI); 妊娠率

· 临床报道 ·

Comparison of pregnancy results between intrauterine insemination and intracervical insemination

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【Abstract】 Objective To compare the difference of outcomes between intrauterine insemination (IUI) and intracervical insemination (ICI) with donor's semen. **Methods** In this retrospective study, 325 patients were treated with 548 cycles artificial insemination with donor semen (AID) during the period from January 2015 to August 2016 in assisted reproductive technology research unit of Fujian maternity and children health hospital of Fujian medical university. Totally 200 cases including 360 cycles of ICI, and 125 cases including 188 cycles of IUI were performed and their pregnancy outcome were compared respectively. **Results** The total pregnancy rates, the pregnancy rates of natural treatment cycle, the pregnancy rates of ovarian stimulation treatment cycle and miscarriage rates in ICI groups were 14.74%, 18.54%, 10.71%, 11.76% and in IUI groups were 28.49%, 32.04%, 23.68%, 5.88%, respectively. The comparative difference between the two groups was significant ($P<0.05$). **Conclusion** Insemination parts may be one of the key factors influencing the AID successful pregnancy, IUI may improve the pregnancy outcome of AID.

【Key words】 Artificial insemination with donor semen (AID); Intrauterine insemination (IUI); Intracervical insemination (ICI); Pregnancy rate

· 临床报道 ·

人乳头瘤状病毒感染型别及多重感染与宫颈癌发病风险的关系研究

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【摘要】目的 分析研究人乳头瘤状病毒(HPV)感染型别与宫颈癌发病风险的关系。**方法** 回顾性分析 2015 年 1 月—12 月液基薄层细胞学检查(TCT)联合 HPV DNA 检查进行宫颈癌筛查后, 再进行阴道镜下宫颈组织病理检查的患者临床资料。结合患者的人口学信息, 分析比较单一 HPV 感染及多重 HPV 感染型别分别与宫颈癌发病风险, 其中以阴道镜下宫颈组织病理检查结果为金标准。**结果** 2 195 名患者的检查结果显示, 年龄是宫颈癌发病风险之一, TCT 检测结果为低度鳞状上皮内病变(LSIL)或高度鳞状上皮内病变(HSIL), 易发高级别宫颈上皮内病变和浸润癌, 单一感染与多重感染患者间宫颈癌发病风险没有统计学差异($P>0.05$), HPV16 型的感染率较高, 无论患者是否为单一与多重感染, HPV16 型都为宫颈癌发病风险, 其 OR 值为 6.27。**结论** 需要重视 38 岁以上妇女的宫颈癌筛查, 随着宫颈病变级别增加, HPV 单一感染率与多重感染率无统计学差异, 且宫颈鳞癌 HPV 感染倾向于单一高危型 HPV16 型。

【关键词】 宫颈癌; 液基薄层细胞学检查(TCT); 人乳头瘤状病毒(HPV); 病理检查; HPV16

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· 临床报道 ·

Research of relationship between type of human papilloma virus infection and risk of cervical cancer

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【Abstract】 Objective To analyze the association between types of human papilloma virus (HPV) infection and risk of cervical cancer. **Methods** A retrospective study was conducted from 1st January 2015 to 31st December 2015. Based on the standardized diagnosis system, thinprep cytologic test (TCT), thin layer cell HPV-DNA and colposcopy cervical tissue pathologic examination were taken in patients according to their conditions. The demographic information of patients was included to assess associations of each type of HPV infection with risk of cervical cancer. Among them, pathologic examination of vaginal microscopically cervical tissue was considered as the gold standard. **Results** This study included 2 195 patients. Age is one of risk factors of cervical cancer. Diagnosed low-grade squamous intraepithelial lesion (LSIL) or high-grade squamous intraepithelial lesion (HSIL) by using TCT test was prone to induce high level of epithelial lesions or invasion cancer. Single and multiple HPV infections in patients had no statistical difference in the risk of cervical cancer. HPV16 incidence was higher, and is a high risk factor of cervical cancer ($OR=6.27$), regardless of single and multiple HPV infections. **Conclusion** It is necessary to take an early screening of cervical cancer for women (>50 years). HPV16 is a high risk factor of cervical cancer. TCT and HPV screening can be used to potentially avoid early-stage cervical cancer.

【Key words】 Cervical cancer; Thinprep cytologic test (TCT); Human papilloma virus (HPV); Pathological examination; HPV16

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· 个案报道 ·

糖原贮积症 II 型合并早孕终止妊娠病例报告和文献复习

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【摘要】目的 总结糖原贮积症合并妊娠的诊疗特点。**方法** 结合本院收治的 1 例患者, 检索相关文献, 进行文献复习。**结果** 糖原贮积症 II 型(GSD II)是一种常染色体隐性遗传病, 是由于酸性 α -葡萄糖苷酶(GAA)基因突变, α -葡萄糖苷酶活性降低, 使糖原不能被降解, 而沉积在各组织器官中, 引起临床症状, 晚发型主要累及呼吸肌, 妊娠期的生理变化可能会加重疾病进展。**结论** GSD II 患者并非不能妊娠, 但妊娠前应进行遗传咨询, 孕期应规律产检、严密监测, 多学科协作, 制定适宜的分娩方式。

【关键词】 糖原贮积症 II 型(GSD II); 妊娠; 文献复习

· 个案报道 ·

Glycogen storage disease type II complicating pregnancy: a case report and literatures review

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【Abstract】 Objective To summarize the clinical features of glycogen storage disease type II (GSD II) combined with pregnancy. **Methods** The literature review was conducted based on the cases published and the one hospitalized in our hospital. **Results** GSD II is an autosomal recessive hereditary disease, which is attributed to the mutation of α -glucosidase gene. Followed by the decreased activity of α -glucosidase enzyme, the glycogen cannot be degraded and deposited in the tissues and organs, and thus causing the clinical spectrum. The type of late onset mainly involves respiratory muscles, and the physical changes during pregnancy may worsen the disease. **Conclusion** The patients with GSD II are not unable to get pregnancy, but they should undertake genetic counseling before pregnancy. During pregnancy, except for regular prenatal care and close monitoring, we should build up multidisciplinary collaboration, and personally appropriate way of delivery.

【Key words】 Glycogen storage disease type II (GSD II); Pregnancy; Literature review

· 个案报道 ·

体外受精 - 胚胎移植术后宫角妊娠合并宫腔粘连 1 例 病例报告与文献回顾

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【摘要】目的 介绍 1 例行体外受精 - 胚胎移植(*in vitro* fertilization and embryo transfer, IVF-ET)、出现宫角妊娠合并宫腔粘连并成功活产的病例。**方法** 对本院 1 例重度宫腔粘连分解术后行 IVF-ET 病例发生宫角妊娠合并宫腔粘连的临床资料进行分析, 并对相关文献进行系统性回顾。**结果** 该病例于孕 36⁺3 周行子宫下段剖宫产术, 成功活产一男婴。**结论** 宫角妊娠是可能危及生命的妇产科急症, 但对于妊娠困难的患者, 严密监测及期待治疗可获得良好的妊娠结局。

【关键词】 宫腔粘连; 体外受精 - 胚胎移植(IVF-ET); 宫角妊娠

· 个案报道 ·

A case of an angular pregnancy with serious intrauterine adhesion resulting a live baby after *in vitro* fertilization and embryo transfer treatment

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【Abstract】Objective To report a rare case of an angular pregnancy with serious intrauterine adhesion resulting a live baby after *in vitro* fertilization and embryo transfer (IVF-ET) treatment. **Methods** The clinical materials from one case with angular pregnancy and serious intrauterine adhesion after IVF-ET was retrospectively analyzed, and associated literatures were reviewed. **Results** The patient underwent low-segment cesarean section at 36⁺³ weeks of gestation and acquired a live baby. **Conclusion** Given the seriousness of normal uterus to rupture, angular pregnancy management considerations might potentially include therapeutic abortion. Alternatively, depending on the degree of desirability of the pregnancy and the risk aversity levels of the gynecologist and patient, “watchful waiting” may be elected.

【Key words】 Intrauterine adhesion; *In vitro* fertilization and embryo transfer (IVF-ET); Angular pregnancy

黄体期促性腺激素释放激素拮抗剂在防治 卵巢过度刺激综合征的应用进展

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【摘要】 卵巢过度刺激综合征(ovarian hyperstimulation syndrome, OHSS)是辅助生殖技术(ART)相关的并发症,是以卵巢体积增大、毛细血管通透性增加、体液外渗为特征的一个系统性综合征。目前已知许多可预测 OHSS 发生的高危因素并给予预防措施,但因其病因尚未明确,临床表现形式多样,给临床干预和治疗带来了不少困难。近年来有文献报道,ART 取卵后黄体期应用促性腺激素释放激素拮抗剂(gonadotropin-releasing hormone antagonist, GnRH-A)能预防和治疗 OHSS。本文将综述黄体期应用 GnRH-A 在防治 OHSS 的作用。

【关键词】 黄体期; 促性腺激素释放激素拮抗剂(GnRH-A); 卵巢过度刺激综合征(OHSS)

· 综述 ·

Progress of luteal phase gonadotropin-releasing hormone antagonist application in prevention and treatment of ovarian hyperstimulation syndrome Ye Jingxin, Qian Weiping

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【Abstract】 Ovarian hyperstimulation syndrome (OHSS), one of assisted reproductive technology (ART) related complications, is a systemic syndrome characterized by the ovarian volume enlargement, increased capillary permeability, and fluid extravasations. At present there have been known many risk factors predicted the occurrences of OHSS and given preventions, however, the etiology of which is not yet clear. The various forms of manifestations bring difficulties for clinical interventions and treatments. Recently it has been reported that after ovum pick-up the application of gonadotropin-releasing hormone antagonist (GnRH-A) in the luteal phase can prevent and treat OHSS. This paper will critically review the progress of luteal phase GnRH-A application in prevention and treatment of OHSS.

【Key words】 Luteal phase; Gonadotropin-releasing hormone antagonist (GnRH-A); Ovarian hyperstimulation syndrome (OHSS)

抗苗勒管激素临床研究应用新进展

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【摘要】 抗苗勒管激素(anti-Müllerian hormone, AMH)是女性重要的生殖生理调节因子之一, 主要由卵巢窦前卵泡及小窦状卵泡颗粒细胞分泌, 不受促性腺激素的调节, 能抑制卵泡的募集、选择, 优势卵泡的发育。由于其血清浓度在整个月经周期中保持相对稳定, 可在周期任意时刻检测, 因此在多囊卵巢综合征(PCOS)、卵巢过度刺激综合征(OHSS)的诊断及治疗过程中具有重要价值; 此外, 对于卵巢储备功能、体外受精-胚胎移植(IVF-ET)妊娠率、卵巢肿瘤治疗效果及预后的评价也有一定的价值, 为肿瘤随访提供了可靠依据。

【关键词】 抗苗勒管激素(AMH); 卵巢储备功能; 多囊卵巢综合征(PCOS); 体外受精/卵胞质内单精子注射(IVF/ICSI)结局; 卵巢肿瘤

• 综述 •

New progress of anti-Müllerian in clinical research and application Gao Xuelin, Liu Yin, Wang Yiqing

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【Abstract】 Anti-Müllerian hormone (AMH) is one of important regulation factors of the female reproductive physiological. It is mainly secreted by the preantral follicles and small antral follicles and out-controlled by the gonadotropins (Gn), could inhibit the recruitment, chosen of follicles, and development of the advantage follicles. Because of its relatively stable serum level throughout the whole menstrual cycle and could be detected any time in the menstrual, AMH has an important value in diagnosing and treatment of polycystic ovary syndrome (PCOS) and ovarian hyperstimulation syndrome (OHSS); furthermore, it has a certain value in ovarian reserve function, pregnancy rates of *in vitro* fertilization embryo transfer (IVF-ET) and ovarian tumor, also provides a reliable basis for ovarian tumor's follow-up.

【Key words】 Anti-Müllerian hormone (AMH); Ovarian reserve function; Polycystic ovary syndrome (PCOS); *In vitro* fertilization/intracytoplasmic sperm injection (IVF/ICSI) outcome; Ovarian tumor

基因组印记与胎盘发育的研究进展

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【摘要】 基因组印记是指来源于双亲源性的等位基因只有一方表达, 这些单亲源性表达的等位基因被称为印记基因。许多研究表明印记基因在胎盘中广泛存在, 与胎盘的生长和发育以及母、胎间的营养物质交换等密切相关。而分析印记基因的功能有助于理解为何在哺乳动物的发育过程中基因会发生印记以及印记基因对发育的意义, 相关印记基因的研究为理解人类疾病提供了新的角度, 包括低体质量出生儿、遗传代谢性疾病以及妊娠并发症如先兆子痫、妊娠期糖尿病等等。因此本综述将从表观遗传角度探讨基因组印记与胎盘发育的关系。

【关键词】 基因组印记; 胎盘生长与发育; 表观遗传; DNA 甲基化; 长链非编码 RNA(LncRNA)

· 综述 ·

Research progress of genetic imprinting and placenta development Sheng Fei, Li Wen

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【Abstract】 Genetic imprinting is a special phenomenon that only one of the parental allelic genes expressed, and these allelic genes defined as imprinted gene. Many studys reported that imprinting genes are widely expressed in the placenta, and participated in the placental development, morphogenesis, and the maternal-fetal transference. The analysis of imprinted genes can help us to understand why these genes are imprinted during mammalian development and the significance of imprinted genes on development. Related studies of imprinted genes provide new perspectives for understanding human disease, including low birth weight infants, genetic metabolic diseases and pregnancy complications, such as preeclampsia and gestational diabetes. Therefore, this review will explore the relationship between genomic imprinting and placental development from epigenetic perspective.

【Key words】 Genetic imprinting; Placental development; Epigenetic; DNA methylation; Long non-coding RNA (LncRNA)

卵母细胞滑面内质网聚集的研究进展

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【摘要】 在人类辅助生殖中, 经促排卵体外获得的卵母细胞中, 有滑面内质网聚集(smooth endoplasmic reticulum aggregate, SERa)形成者占有一定比例。既往研究显示, SERa 对胚胎质量及妊娠结局会造成不良影响。但近年来研究显示: SERa 卵母细胞可诞生完全健康的新生儿。卵母细胞胞质内 SERa 的形成可能与遗传因素、卵巢过度刺激、超促排卵方案及扳机日高雌二醇(E₂)等多种因素相关。大多数学者认为卵母细胞 SERa 的形成会导致受精率、卵裂率和囊胚形成率降低及胚胎质量的下降, 使得妊娠率显著降低; 然而, 也有多项报道已证实 SERa 的卵母细胞的胚胎质量与正常卵母细胞并无差异。因此对于那些临床助孕治疗中获得 SERa 胚胎或者胚胎数目不足的患者, 可考虑移植 SERa 胚胎。未来, 应多关注 SERa 对体外受精(IVF)结局的影响及着重阐明 SERa 形成机制, 从而从根本上防止异常卵母细胞的出现。

【关键词】 滑面内质网聚集(SERa); 人卵母细胞; 胚胎发育; 妊娠结局; 研究进展

· 综述 ·

Research progress on smooth endoplasmic reticulum aggregation in oocytes *Chen Panyu, Fang Cong*

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【Abstract】 Smooth endoplasmic reticulum aggregation (SERa) in oocytes account for a certain proportion in assisted reproduction. Previous studies have shown that SERa has an adverse effect on embryo and pregnancy outcomes, but in recent years, studies show that SERa oocytes can produce completely healthy newborns. SERa was related to various factors, such as genetic factors, ovarian hyperstimulation, different stimulation regimens and high estradiol (E_2) level on trigger day and other factors. Most scholars believed that the formation of SERa will lead to decreased oocyte fertilization rate, cleavage rate and blastocyst formation rate and worse quality of embryos, resulting in lower pregnancy rate; however, a number of reports found no difference between embryo originated from SERa oocytes and normal oocytes. Therefore, it's rational to transfer embryos coming from SERa oocytes to those who obtain inadequate embryos. Future study should pay more attention to the effect SERa exerts on the outcome of *in vitro* fertilization (IVF) and the formation mechanism of SERa, so we can prevent this abnormal phenomenon from the root.

【Key words】 Smooth endoplasmic reticulum aggregate (SERa); Human oocyte; Embryo development; Pregnancy outcome; Research progress