



生殖与避孕

SHENGZHI YU BIYUN

月刊 1980年12月 创刊

2015年7月第35卷第7期

主管

国家卫生和计划生育委员会

主办

上海市计划生育科学研究所

协办

计划生育药具重点实验室

湖北葛店人福药业有限责任公司

主编

乔杰

编辑部主任

王黎茜

责任编辑

李天琦

编辑出版

《生殖与避孕》编辑部

(上海老沪闵路 779 号, 200237)

电话: 021-64438169

传真: 021-64438975

E-mail: randc_journal@163.com

http://www.RandC.cn

印刷

上海竟成印务有限公司

广告经营许可证

3100420100002

国内总发行

上海市报刊发行处

国内订购

全国各地邮政局

国外发行

中国国际图书贸易公司

(北京 399 信箱)

报刊代号

4-294(国外代号: M389)

国内统一连续出版物号

CN31-1344/R

定价

每期 20.00 元

目次

临床指南

辅助生殖技术并发症诊断及处理共识·····刘风华 杨业洲 张松英,等 (431)

实验研究

红芸豆植物凝集素终止小鼠中晚期妊娠中的相关生殖激素变化研究·····
·····杨成焕 叶媛 杨姚,等 (440)

可逆抑制血管内皮生长因子(VEGF)表达转基因小鼠子宫基因转录谱分析·····
·····芦小单 方艳秋 纪艳,等 (446)

临床研究

年轻女性长方案获卵数与临床结局的关系·····徐晓航 陈圆辉 张少娣,等 (452)

低氧培养对未成熟卵体外成熟及胚胎发育潜能的影响·····
·····黄玉玲 刘见桥 龙晓林,等 (458)

多囊卵巢综合征患者促甲状腺素浓度与性激素、胰岛素抵抗及血脂关系的分析
·····艾凤连 徐玉萍 赵林海,等 (463)

输卵管妊娠早期诊断的临床前瞻性研究·····施月春 王川 吴群,等 (468)

综述

精子获能中信号转导途径的研究进展·····伍克佳 黄东晖 (472)

不同治疗方案对子宫内膜异位症合并不孕患者生育影响的研究进展·····
·····李萌 夏天 王宝娟 (478)

女用安全套的种类及国内可接受性研究进展·····柏建芸 周宁 (484)

临床报道

特发性男性不育症患者精子功能检测的临床分析·····张艳萍 张丽红 邱毅 (489)

冻融囊胚移植降低重复性异位妊娠发生·····殷宝莉 韦多 张少娣,等 (494)

输卵管结核的子宫输卵管造影表现·····张海霞 孙明华 朱家樑,等 (498)

讲座

克罗米芬在体外受精-胚胎移植方案中的应用·····门鸿芹 范莹露 腊晓琳 (504)



Contents

Directed by

National Health and Family Planning
Commission of PRC

Sponsored by

Shanghai Institute of Planned
Parenthood Research

Editor-in-Chief

Jie QIAO

Executive Editor

Tian-qi LI

Editing

Editorial Board of *Reproduction
and Contraception* No.779, Lao-
humin Road, Shanghai 200237,
China

Tel

+86-21-64438169

Fax

+86-21-64438975

E-mail

randc_journal@163.com

Website

<http://www.RandC.cn>

Printing

Shanghai Jingcheng Printing
Co., Ltd.

Domestic Distribution

Shanghai Post Office

Domestic Subscription

Local Post Offices

Foreign Distribution

China International Book
Trading Corporation
(GUOJI SHUDIAN)

Postal Code

4-294(Foreign Code: M389)

CSSN

ISSN 0253-357X
CN 31-1344/R

CLINICAL GUIDELINE

A consensus of diagnosis and treatment for complications during assisted reproductive technology.....*Feng-hua LIU, Ye-zhou YANG, Song-ying ZHANG, et al.* (431)

LABORATORY STUDY

Changes of sexual hormones in mid-late pregnant mice after administration of red kidney beans lectin*Cheng-huan YANG, Yuan YE, Yao YANG, et al.* (440)

Transcriptional profiling of mouse uterus at pre-implantation stage under VEGF repression.....*Xiao-dan LU, Yan-qiu FANG, Yan JI, et al.* (446)

CLINICAL STUDY

Analysis of optimal number of oocytes on clinical outcomes of young women with long protocol in IVF treatment...*Xiao-hang XU, Yuan-hui CHEN, Shao-di ZHANG, et al.* (452)

Developmental competence of human oocytes after *in vitro* maturation and *in vitro* culture under low oxygen concentrations.....*Yu-ling HUANG, Jian-qiao LIU, Xiao-lin LONG, et al.* (458)

Association between thyroid stimulating hormone and sex hormones, insulin resistance, serum lipid in patients with polycystic ovary syndrome.....*Feng-lian AI, Yu-ping XU, Lin-hai ZHAO, et al.* (463)

Diagnosis of atypical early tubal pregnancies: a clinical prospective study*Yue-chun SHI, Chuan WANG, Qun WU, et al.* (468)

REVIEW

Advances of signal transduction pathway in sperm capacitation.....*Ke-jia WU, Dong-hui HUANG* (472)

Research progress of the effects of different treatments for endometriosis associated infertility on reproduction.....*Meng LI, Tian XIA, Bao-juan WANG* (478)

Female condom type and domestic acceptability research progress.....*Jian-yun BAI, Ning ZHOU* (484)

CLINICAL REPORT

Clinical analysis of sperm function in patients with unexplained infertility.....*Yan-ping ZHANG, Li-hong ZHANG, Yi QIU* (489)

Frozen-thawed blastocyst transfer could reduce the incidence of repeated ectopic pregnancy.....*Bao-li YIN, Duo WEI, Shao-di ZHANG, et al.* (494)

Hysterosalpingographic appearances of tubal tuberculosis.....*Hai-xia ZHANG, Ming-hua SUN, Jia-liang ZHU, et al.* (498)

LECTURE

Application of clomiphene citrate *in vitro* fertilization and embryo transplantation*Hong-qin MEN, Ying-lu FAN, Xiao-lin LA* (504)

• 临床指南 •

辅助生殖技术并发症诊断及处理共识

刘风华 杨业洲 张松英 乔杰 刘嘉茵

(中华医学会生殖医学分会)

【摘要】 促排卵治疗是辅助生殖技术(ART)的重要内容之一,但其改善临床妊娠率的同时,亦使卵巢过度刺激综合征(OHSS)、多胎妊娠、多部位妊娠等并发症发生几率增高。本文从ART并发症的诊断、治疗及预防等方面进行阐述,结合近年来国内、外相关领域研究进展及临床应用,中华医学会生殖医学分会部分专家对ART并发症的诊断和处理达成共识,以指导规范的临床应用。

关键词: 辅助生殖技术(ART); 促排卵; 卵巢过度刺激综合征(OHSS); 医源性多胎妊娠; 多部位妊娠

中图分类号: R711.6

文献标识码: A

文章编号: 0253-357X(2015)07-0431-09

通讯作者: 乔杰; E-mail: jie.qiao@263.net

作者单位: 广东省妇幼保健院生殖中心(刘风华); 四川大学华西第二医院(杨业洲); 邵逸夫医院(张松英); 北京大学第三医院(乔杰); 南京医科大学第一附属医院(刘嘉茵)

• 临床指南 •

A consensus of diagnosis and treatment for complications during assisted reproductive technology

Feng-hua LIU, Ye-zhou YANG, Song-ying ZHANG, Jie QIAO, Jia-yin LIU

(Society of Reproductive Medicine Study Groups of the Chinese Medical Association)

【ABSTRACT】 Ovarian stimulation is one of the important contents of assisted reproductive technology (ART), the application of which improves the clinical pregnancy rate, but increases the rate of ovarian hyperstimulation syndrome (OHSS), multiple pregnancy and heterotopic pregnancy. This article elaborated the diagnosis, treatment, and prevention of these complications. Combining the study progress and clinical application of related fields domestic and abroad in recent years, some experts of Chinese Medical Association reproductive medicine group reached a consensus in order to guide the standardization of its clinical use.

Key words: assisted reproductive technology (ART); ovarian stimulation; ovarian hyperstimulation syndrome (OHSS); iatrogenic multiple pregnancies; heterotopic pregnancy

通讯作者: 乔杰; E-mail: jie.qiao@263.net

作者单位: 广东省妇幼保健院生殖中心(刘风华); 四川大学华西第二医院(杨业洲); 邵逸夫医院(张松英); 北京大学第三医院(乔杰); 南京医科大学第一附属医院(刘嘉茵)

• 实验研究 •

红芸豆植物凝集素终止小鼠中晚期妊娠中的相关生殖激素变化研究

杨成焕 叶媛 杨姚 李阔 姚娅婷 王静静 张田 王敏康

(生物能源持续开发利用教育部工程研究中心, 云南师范大学生命科学院, 昆明, 650500)

【摘要】目的: 探讨红芸豆植物凝集素(PHA)在终止小鼠中晚期妊娠时对孕鼠相关神经内分泌激素水平的影响。方法: 将妊娠14 d的孕鼠随机分为PHA组和溶剂对照(PBS)组, 每组各40只。采用非手术法经阴道向每只孕鼠子宫注射5 mg的红芸豆PHA或等量的PBS, 并于注射后2 h、5 h、8 h及发生流产时采血, 取子宫胎盘(每个时间点每组处死10只动物), 采用电化学发光法对孕鼠血清中的孕酮(P)、雌二醇(E₂)、睾酮(T)、催乳素(PRL)、黄体生成素(LH)、卵泡刺激素(FSH)进行检测, 比较妊娠结局; 用派诺宁-甲基绿染色法观察子宫、胎盘石蜡切片。结果: 注射PHA组孕鼠血清中E₂、FSH、LH和T水平与注射PBS组无统计学差异; 而P和PRL水平在注射红芸豆PHA后2 h时明显高于PBS组, 流产时明显低于PBS组; PHA组胎盘出现明显细胞凋亡。结论: 红芸豆PHA终止小鼠中晚期妊娠并不改变孕鼠体内的E₂、FSH、LH和T水平, 但对P和PRL有较大影响, 提示红芸豆PHA通过作用于子宫局部而导致流产, 不影响中枢神经内分泌系统。

关键词: 红芸豆; 植物凝集素(PHA); 小鼠; 中晚期妊娠; 性激素; 催乳素(PRL); 孕酮(P)

中图分类号: R714.21

文献标识码: A

文章编号: 0253-357X(2015)07-0440-06

本课题受国家自然科学基金项目(31160244); 科技型中小企业技术创新基金项目(13C26215305477); 云南省教厅重大专项(ZD2011008); 生物能源持续开发利用教育部工程研究中心及云南省生物质能与环境生物技术重点实验室联合开放基金项目(20100506) 资助

通讯作者: 王敏康; Tel: +86-13888011251;

E-mail: wangmk1998@163.com

Changes of sexual hormones in mid-late pregnant mice after administration of red kidney beans lectin

Cheng-huan YANG, Yuan YE, Yao YANG, Kuo LI, Ya-ting YAO,
Jing-jing WANG, Tian ZHANG, Min-kang WANG

(*Engineering Research Center of Sustainable Development and Utilization of Biomass Energy, Ministry of Education; School of Life Sciences, Yunnan Normal University, Kunming, 650500*)

【ABSTRACT】 Objective: To explore the changes of serum sexual hormones from pregnant mice with termination of middle and late pregnancy by administering red kidney bean phytohemagglutinin or lectin (PHA or RKBL). **Methods:** Fourteen-day pregnant (mid-late period in pregnancy) mice were injected 5 mg PHA to one side of uterine by nonsurgical method through vaginal. PBS was used in control group. Blood sample, uterine and placenta were collected from ten mice at each time of 2 h, 5 h, 8 h after PHA or PBS administration per group and sexual hormones above-mentioned were tested by electrochemical luminescence. Sexual hormones and pregnancy outcome between the two groups were compared. Paraffin section of uterine and placenta dyed by Pyronine-methyl green was observed. **Results:** There were no difference for luteinizing hormone (LH), follicle-stimulating hormone (FSH), estradiol (E_2) and testosterone (T) between PHA group and PBS group. However, there were significant differences on progesterone (P) and prolactin (PRL) between PHA group and PBS group. It showed that the P and PRL levels significantly increased compared with control group at 2 h and decreased significantly at abortion time compared with control group. An obvious apoptosis in placenta appeared in PHA group. **Conclusion:** Termination of mid-late pregnancy in mice by red kidney beans PHA did not change the E_2 , FSH, LH and T levels. But it changes the P and PRL levels in process of termination pregnancy. Red kidney beans PHA played the role in local uterine area and had no influences on hypothalamus-pituitary neuro-endocrine system.

Key words: red kidney beans; phytohemagglutinin (PHA); mouse; mid-late pregnancy; sexual hormones; prolactin (PRL); progesterone (P)

本课题受国家自然科学基金项目(31160244);科技型中小企业技术创新基金项目(13C26215305477);云南省教育厅重大专项(ZD2011008);生物能源持续开发利用教育部工程研究中心及云南省生物质能与环境生物技术重点实验室联合开放基金项目(20100506)资助

通讯作者:王敏康; Tel: +86-13888011251;

E-mail: wangmk1998@163.com

可逆抑制血管内皮生长因子(VEGF)表达转基因小鼠子宫基因转录谱分析

芦小单^{1,2} 方艳秋¹ 纪艳³ 郑耀武³ 谭岩^{1,2}

(1. 吉林省人民医院生殖医学中心, 长春, 130021)

(2. 吉林大学第一医院免疫学教研室, 长春, 130026)

(3. 东北师范大学转基因动物中心, 长春, 130024)

【摘要】目的: 研究血管内皮生长因子(VEGF)对子宫中基因表达水平及信号通路的调控作用。方法: 利用四环素可逆调节VEGF基因表达的转基因小鼠, 通过新一代测序数字基因表达谱(DGE)方法分析在VEGF表达被抑制情况下的子宫基因表达水平。采用实时定量PCR验证部分表达异常的基因。结果: 检测到在小鼠子宫中表达的基因约 6×10^6 个。其中在VEGF基因表达被抑制条件下, 表达水平变化比较明显的基因有2 398个, 其中上调的基因为1 231个, 主要包括调节细胞内激酶基因、细胞分裂的基因、蛋白折叠的基因等; 下调的基因为1 167个, 主要包括调节肌肉发育的基因、细胞内基质形成的基因、血管形成的基因等。荧光定量PCR验证表明, 基因表达水平变化与转录谱结果高度相关, VEGF抑制后小鼠子宫内表达上调的基因有 *P2ry14*、*Eln*、*Rnf187*、*Oxtr*、*Inhbb*、*Pabpn1*、*Car2* 和 *Mif1* ($r=0.972$), 表达下调的基因 *VEGF*、*Acta2*、*Pcx*、*Tnc*、*Igfbp3*、*Cnn1* 和 *Hopx* ($r=0.931$)。结论: VEGF表达水平与子宫功能的维持密切相关, 为不明原因不孕的诊治提供了新思路。

关键词: 四环素可逆调节系统; 血管内皮生长因子(VEGF); 子宫; 转录谱

中图分类号: R711

文献标识码: A

文章编号: 0253-357X(2015)07-0446-06

本课题为吉林省人社厅留学人员科技创新创业项目(201215), 中国博士后基金(2014M551176), 吉林省科技发展项目(20150414023GH 和 20150520038JH), 吉林省卫生科技项目(2013Q009)

通讯作者: 方艳秋; Tel: +86-431-85595659;

E-mail: yq.fang@163.com

Transcriptional profiling of mouse uterus at pre-implantation stage under VEGF repression

Xiao-dan LU^{1,2}, Yan-qiu FANG², Yan JI³, Yao-wu ZHENG³, Yan TAN^{1,2}

(1. Reproductive Center, the First Affiliated Hospital of Jilin University, Changchun, 130026)

(2. Biotherapy Center, Jilin Province People's Hospital, Changchun, 130021)

(3. Transgenic Animal Center, Northeast Normal University, Changchun, 130024)

【ABSTRACT】 Objective: To study the value of vascular endothelial growth factor (VEGF) in reproduction immunology. **Methods:** The transgenic mouse model of tetracycline controlled reversible VEGF repression was established. Digital gene expression (DGE) method was used to analyze gene expression level changes of mouse uterus. Partly genes with abnormal expression was identified by Real-time PCR. **Results:** There were about 6 million genes expressed in mouse uterus. Under the condition of VEGF repression, 2 398 genes expression were changed over 200 folds compared with the control. A total of 1 231 genes were up-regulated, include genes regulating intracellular kinase, cell division, protein folding, etc. While 1 167 genes were down-regulated, including genes regulating muscle development, cell matrix construction, blood vessel forming, etc. Expression of up- or down-regulated gene by VEGF repression in DGE analysis were highly associated, indicated by Real-time PCR. After VEGF repression, up-regulated genes included *P2ry14*, *Eln*, *Rnf187*, *Oxtr*, *Inhbb*, *Pabpn1*, *Car2* and *Mif1* ($r=0.972$), down-regulated genes included *VEGF*, *Acta2*, *Pcx*, *Tnc*, *Igfbp3*, *Cnn1* and *Hopx* ($r=0.931$). **Conclusion:** VEGF expression level is associated with reproductive function, which may become a new target of treating infertility diseases.

Key words: reversible tetracycline regulation system; vascular endothelial growth factor (VEGF); uterine; transcriptional profiling

本课题为吉林省人社厅留学人员科技创新创业项目(201215),
中国博士后基金(2014M551176), 吉林省科技发展项目
(20150414023GH 和 20150520038JH), 吉林省卫生科技项
目(2013Q009)

通讯作者: 方艳秋; Tel: +86-431-85595659;
E-mail: yq.fang@163.com

• 临床研究 •

年轻女性长方案获卵数与临床结局的关系

徐晓航^{1,2*} 陈圆辉^{1,2*} 张少娣^{1,2} 王倩^{1,2} 张翠莲^{1,2}

(1. 郑州大学人民医院, 郑州, 450000)

(2. 河南省人民医院, 郑州, 450000)

【摘要】目的: 探讨年轻、卵巢储备正常女性黄体期长方案中最佳获卵数范围, 以取得最佳的临床结局。方法: 回顾性分析首次接受体外受精-胚胎移植(IVF-ET)且卵巢储备正常的1 526例患者的临床资料。根据获卵数不同分为5组: A组(4~6枚)、B组(7~9枚)、C组(10~12枚)、D组(13~15枚)、E组(≥ 16 枚), 比较各组的受精率、卵裂率、种植率、可移植胚胎数、早期流产率、临床妊娠率及活产率、因卵巢过度刺激综合征(OHSS)倾向全部胚胎冷冻率、无可利用胚胎取消周期率和累积妊娠率及活产率等。结果: ①各组受精率、卵裂率、无可利用胚胎取消率、种植率及早期流产率无统计学差异($P>0.05$)。新鲜周期移植临床妊娠率及活产率C组最高, 但差异无统计学意义($P>0.05$)。②随着获卵数的增加, 可利用胚胎数增加, 因OHSS倾向全部胚胎冷冻率显著增加。可利用胚胎率E组显著低于其他4组, D组显著低于B组($P<0.05$)。累积妊娠率及累积活产率A组显著低于C组、D组及E组, B组显著低于E组, 差异均具有统计学意义($P<0.05$)。③E组全部胚胎冷冻后首次复融移植临床妊娠率显著高于新鲜移植周期($P<0.05$)。结论: 行黄体期长方案促排卵的年轻患者, 获卵数为10~12枚时, 在获得理想妊娠结局的同时, 能够降低OHSS的风险, 是理想的获卵数范围。当获卵数 ≥ 16 枚时, 全部胚胎冷冻后择期行复融移植能够取得更理想的临床结局。

关键词: 体外受精-胚胎移植(IVF-ET); 长方案; 获卵数; 妊娠结局

中图分类号: R711.6

文献标识码: A

文章编号: 0253-357X(2015)07-0452-06

本课题为郑州市科技创新团队项目, 项目号为13PCXTD435

通讯作者: 张翠莲; Tel: +86-13598836086;

E-mail: zcl6086@gmail.com

*: 共同第一作者

• 临床研究 •

Analysis of optimal number of oocytes on clinical outcomes of young women with long protocol in IVF treatment

Xiao-hang XU^{1,2*}, Yuan-hui CHEN^{1,2*}, Shao-di ZHANG^{1,2},
Qian WANG^{1,2}, Cui-lian ZHANG^{1,2}

(1. Reproductive Center, People's Hospital of Zhengzhou University, Zhengzhou, 450000)

(2. Henan Provincial People's Hospital, Zhengzhou, 450000)

*: Equally contributed to the research

【ABSTRACT】 Objective: To investigate the association between oocyte number and clinical outcomes of young infertility women undergoing long protocol during *in vitro* fertilization (IVF) cycles. **Methods:** The data of 1 526 infertile women undergoing their first IVF treatment cycle of long protocol were collected retrospectively. Patients were divided into five groups based on retrieval oocyte number: group A (4–6), group B (7–9), group C (10–12), group D (13–15), group E (≥ 16). The general clinical characteristics and clinical outcomes of IVF were compared. **Results:** 1) There were no significant differences in fertilization rate, cleavage rate, cancellation rate, pregnancy rate, implantation rate, early miscarriage rate and live birth rate among five groups ($P > 0.05$). However, group C had the highest clinical pregnancy rate and live birth rate in fresh cycle. 2) With the increase of oocyte retrieved, the number of transferrable embryos and OHSS risk increased significantly. The transferrable embryo rate of group E was lower than that in the other four groups and in group D it was lower than that in group B. Also, group A had the lowest cumulative pregnancy rate and cumulative live birth rate, which in group B were lower than those in group E ($P < 0.05$). 3) The clinical pregnancy rate in the first frozen-thawed embryo transfer cycle was much higher than fresh cycle in group E. **Conclusion:** For young infertile women undergoing long protocol in IVF, 10–12 oocytes is an ideal range of oocyte number to obtain the optimized pregnancy outcomes and a balance the OHSS risk. When the No. of retrieval oocyte is ≥ 16 , frozen-thawed embryo transfer may improve the pregnancy rate.

Key words: *in-vitro* fertilization and embryo transfer (IVF-ET); long protocol; number of retrieval oocytes; clinical outcome

本课题为郑州市科技创新团队项目, 项目号为 13PCXTD435

通讯作者: 张翠莲; Tel: +86-13598836086;

E-mail: zcl6086@gmail.com

*: 共同第一作者

低氧培养对未成熟卵体外成熟 及胚胎发育潜能的影响

黄玉玲 刘见桥 龙晓林 康祥锦

(广州医科大学第三附属医院生殖医学中心, 广东省生殖医学重点实验室, 广州, 510150)

【摘要】目的: 研究辅助生殖技术超促排卵治疗中获得的未成熟卵在低氧培养体系中的发育潜能。方法: 卵胞质内单精子显微注射(ICSI)或体外受精-胚胎移植中(IVF-ET)短时受精中挑选出的GV (germinal vesicle)期卵母细胞80枚, M_I(metaphase I)期卵母细胞124枚, 随机分为实验组和对照组, 实验组置于低氧分压(体积分数5%)的三气培养箱中、对照组置于高氧分压(体积分数20%)常规培养箱中进行体外成熟培养(IVM)及随后的囊胚和胚胎培养。IVM后成熟的卵母细胞进行ICSI受精, 观察受精率、卵裂率及囊胚形成率。结果: 实验组GV期未成熟卵体外培养至M_{II}卵的成熟率、双原核(2PN)率、卵裂率、囊胚形成率及优质囊胚率与对照组无统计学差异($P>0.05$)。但实验组M_I期卵培养至M_{II}卵的成熟率[96.8%(60/62)]、2PN率[80%(48/60)]、囊胚形成率[43.8%(21/48)]及优质囊胚率[20.8%(10/48)]均高于对照组[分别为58.1%(36/62), 52.8%(19/36), 11.8%(2/17)和0.0%(0/17)], 差异有统计学意义($P<0.05$), 而2种培养体系的卵裂率无统计学差异。结论: 超促排卵中获得的未成熟卵, 特别是M_I期裸卵在低氧培养体系中进行体外成熟及后续的胚胎培养, 有利于获得优质囊胚。

关键词: 体外成熟培养(IVM); 未成熟卵母细胞; 氧分压

中图分类号: R711

文献标识码: A

文章编号: 0253-357X(2015)07-0458-05

本研究为市科信局项目(2011J4100047); 国家自然科学基金资助项目(81401504); 广州市教育局资助项目(1201430205)
通讯作者: 康祥锦; Tel: +86-13825082957; Fax: +86-20-81292149;
E-mail: kangxiangjin@163.com

Developmental competence of human oocytes after *in vitro* maturation and *in vitro* culture under low oxygen concentrations

Yu-ling HUANG, Jian-qiao LIU, Xiao-ling LONG, Xiang-jin KANG

(Center for Reproductive Medicine, the Third Affiliated Hospital of Guangzhou Medical University; Key Laboratory for Reproductive Medicine of Guangdong Province, Guangzhou, 510150)

【ABSTRACT】 Objective: To investigate the developmental potential of immature oocytes obtained from assisted reproductive technology hyperstimulation ovulation treatment under low oxygen tension culture system. **Methods:** The oocytes were obtained from intracytoplasmic sperm injection (ICSI) or short-term fertilization, there were 80 oocytes in germinal vesicle (GV) stage and 124 oocytes in metaphase I (M_I) stage. All of these immature oocytes were assigned randomly to 5% oxygen tension incubator (experimental group) or 20% oxygen tension of conventional culture incubator (control group) for maturation culture. All the matured metaphase II (M_{II}) oocytes were fertilized by ICSI. The fertilization rate, the cleavage rate and the blastocyst formation rate of the two culture systems were investigated. **Results:** For the GV oocytes, there was no significant difference in the maturation rate, the 2PN rate, the cleavage rate, the blastocyst formation rate and the good-quality blastocyst rate between the two groups. For the M_I oocytes, there were significantly higher maturation rate, 2PN rate, cleavage rate, blastocyst formation rate and good-quality blastocyst rate in experimental group than the control [96.8% (60/62) vs 58.1% (36/62), 80.0% (48/60) vs 52.8% (19/36), 43.8% (21/48) vs 11.8% (2/17) and 20.8% (10/48) vs 0.0% (0/17)]. **Conclusion:** The immature oocytes obtained from super ovulation promoting, especially the M_I oocytes can obtain higher maturation rate and more good-quality blastocysts in low oxygen tension culture system.

Key words: *in vitro* maturation (IVM); immature oocytes; oxygen tension

本研究为市科信局项目(2011J4100047); 国家自然科学基金资助项目(81401504); 广州市教育局资助项目(1201430205)
通讯作者: 康祥锦; Tel: +86-13825082957; Fax: +86-20-81292149;
E-mail: kangxiangjin@163.com

多囊卵巢综合征患者促甲状腺素浓度与性激素、胰岛素抵抗及血脂关系的分析

艾风连¹ 徐玉萍¹ 赵林海² 邢琼¹ 魏兆莲¹ 曹云霞¹

(1. 安徽医科大学第一附属医院生殖中心, 合肥, 230022)

(2. 安徽医科大学, 合肥, 230022)

【摘要】目的: 探讨多囊卵巢综合征(PCOS)患者血清促甲状腺激素(TSH)浓度与临床特征及内分泌代谢指标之间的相关性。方法: 选择485例PCOS患者, 测量身高、体质量、腰围、臀围, 应用电化学发光法分析测定血清TSH、游离甲状腺素(FT4)、游离三碘甲状腺素(FT3)、总胆固醇(TC)、低密度脂蛋白胆固醇(LDL-C)、极低密度脂蛋白胆固醇(VLDL-C)、高密度脂蛋白胆固醇(HDL-C)、三酰甘油(TG)、载脂蛋白A(apoA)、载脂蛋白B(apoB)、空腹血糖(FBG)、空腹胰岛素(INS)、卵泡刺激素(FSH)、黄体生成素(LH)、睾酮(T)、催乳素(PRL)、雌二醇(E₂)、雄稀二酮(A2)和性激素结合球蛋白(SHBG); 计算体质量指数(BMI)、腰臀比(WHR)、LH与FSH比值(LH/FSH); 采用稳态模型评估的胰岛素抵抗指数(HOMA-IR)。按血清TSH浓度将其分为3组, A组(n=297): TSH<2.5 mIU/L; B组(n=120): TSH为2.5~4.0 mIU/L; C组(n=68): TSH>4.0 mIU/L。比较3组上述各项指标的差异及TSH与各项指标间的相关性。结果: 3组患者BMI、腰围、臀围、VLDL-C、TG、HDL-C、LH及apoA差异有统计学意义(P<0.05)。C组BMI、腰围、臀围、TG、VLDL-C及apoA均高于A组(P<0.05), 而HDL及LH均低于A组(P<0.05)。C组BMI及TG均高于B组, 差异有统计学意义(P<0.05), 而HDL-C低于B组, 差异有统计学意义(P<0.05)。B组VLDL-C高于A组(P<0.05)。TSH升高与BMI、体质量、腰围、臀围、TG、VLDL-C、HOMA-IR呈正相关, 而与HDL-C、LH呈负相关(P<0.05)。与其他相关代谢指标之间无统计学意义(P>0.05)。结论: PCOS患者的TSH与脂代谢指标有相关性, TSH>4 mIU/L时脂代谢发生显著变化。

关键词: 多囊卵巢综合征(PCOS); 促甲状腺激素(TSH); 脂代谢

中图分类号: R711.75

文献标识码: A

文章编号: 0253-357X(2015)07-0463-05

通讯作者: 曹云霞; Tel: +86-551-62923715;

E-mail: caoyunxia6@126.com

Association between thyroid stimulating hormone and sex hormones, insulin resistance, serum lipid in patients with polycystic ovary syndrome

Feng-lian AI¹, Yu-ping XU¹, Lin-hai ZHAO², Qiong XING¹,
Zhao-lian WEI¹, Yun-xia CAO¹

(1. The Reproductive Medicine Center, the First Affiliated Hospital of Anhui Medical University, Hefei, 230022)

(2. Anhui Medical University, Hefei, 230022)

【ABSTRACT】 Objective: To analyze the polycystic ovary syndrome (PCOS) patients with serum thyroid stimulating hormone concentration and the correlation between clinical features and endocrine metabolism index. **Methods:** Four hundred and eighty-five cases of patients with PCOS were enrolled, height, weight, waist, hip were measured. Chemiluminescence was applied for measuring TSH, free thyroxine (FT₄), free three iodine thyroid hormone (FT₃), total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), very low-density lipoprotein cholesterol (VLDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides (TG), apolipoprotein A (apoA), apolipoprotein B (apoB), fasting blood glucose (FBG), fasting serum insulin (INS), follicle stimulating hormone (FSH), luteinizing hormone (LH), testosterone (T), prolactin (PRL), estrogen (E₂), androstendione (A₂), sex-hormone binding protein (SHBG). Body mass index (BMI), waist hip ratio (WHR), LH-to-FSH ratio (LH/FSH) were calculated. The insulin resistance index was evaluated by steady-state model (HOMA-IR); all patients were divided into three groups according to serum thyroid-stimulating hormone: group A with TSH<2.5 mIU/L (*n*=297), group B with TSH 2.5–4.0 mIU/L (*n*=120); group C with TSH>4.0 mIU/L (*n*=68); all the hormone parameters mentioned above were compared among groups A, B and C and the correlation with TSH was analyzed. **Results:** BMI, waist, hip, VLDL-C, TG, HDL-C, LH and apoA of patients among three groups were significantly different (*P*<0.05). The BMI, Waist, Hip, TG, VLDL-C and apoA in group C were significantly higher than those in group A (*P*<0.05), whereas HDL-C and LH were significantly lower than those in group A (*P*<0.05). BMI and TG in group C were significantly higher than those in group B (*P*<0.05), whereas HDL-C was significantly lower than that in group B (*P*<0.05). VLDL-C in group B was significantly higher than that in group A (*P*<0.05). TSH increased with BMI, weight, waist, hip, TG, VLDL-C, HOMA-IR were positively correlated, and negative correlation with HDL-C, LH (*P*<0.05). No significant differences were shown in other clinical and metabolic indicators (*P*<0.05). **Conclusion:** There was a significant correlation between TSH and lipid metabolic parameters. Women with PCOS and with TSH>4.0 mIU/L had significantly endocrine and metabolic changes.

Key words: polycystic ovary syndrome (PCOS); thyroid stimulating hormone (TSH); lipid metabolic

输卵管妊娠早期诊断的临床前瞻性研究

施月春¹ 王川² 吴群¹ 贺展望¹ 谢敏慧¹ 金玲丽¹

(1. 浙江省宁海妇幼保健院, 宁海, 315600)

(2. 缙云县人民医院妇产科, 丽水, 323000)

【摘要】目的: 探讨输卵管妊娠的早期诊断方法。方法: 停经45 d内的可疑早期异位妊娠患者83例, 行阴道后穹隆穿刺取得腹腔液, 同时进行腹腔液及静脉血清 β -hCG、 E_2 、P定量测定, 以腹腔液 β -hCG/血清 β -hCG的比值分组, 临床追踪妊娠预后, 以腹腔镜手术病理诊断或诊刮病理诊断作为明确宫内、外妊娠的依据, 并将腹腔液 β -hCG/血清 β -hCG的比值与妊娠结局进行关联分析。结果: 腹腔液 β -hCG/血清 β -hCG比值 >1 者均为输卵管妊娠; 腹腔液 β -hCG/血清 β -hCG比值 <1 者均为宫内妊娠, 输卵管妊娠患者腹腔液及血清 E_2 、P值明显低于宫内妊娠者, E_2 、P的腹腔液与外周血比值在两组间无统计学差异。行后穹隆穿刺无一例发生感染。结论: 腹腔液 β -hCG/血清 β -hCG的比值是早期输卵管妊娠的准确诊断依据, 凡腹腔液 β -hCG明显高于静脉血 β -hCG者为输卵管妊娠, 反之为宫内妊娠, 符合率为100%。

关键词: 输卵管妊娠; 腹腔液; β -hCG; 后穹隆穿刺

中图分类号: R714.22⁺1

文献标识码: A

文章编号: 0253-357X(2015)07-0468-04

本研究为浙江大学开放基金(2012RG/RH-0010)和宁波市医学
科技计划(2011B19)资助项目

通讯作者: 金玲丽; Tel: +86-18906606869;

E-mail: 18906606869@189.cn

Diagnosis of atypical early tubal pregnancies: a clinical prospective study

Yue-chun SHI¹, Chuan WANG², Qun WU¹, Zhan-wang HE¹,
Min-hui XIE¹, Ling-li JIN¹

(1. Ninghai Maternity and Child Care Hospital of Zhejiang Province, Ninghai, 315600)

(2. Department of Obstetrics and Gynecology of Jinyun People's Hospital, Lishui, 323000)

【ABSTRACT】 Objective: To investigate the diagnosis of atypical early tubal pregnancies. **Methods:** A total of 88 atypical suspicious early ectopic pregnancy patients were enrolled. All the patients were performed culdocentesis, with the serum and peritoneal fluid β -hCG, estradiol (E_2), progesterone (P) quantitatively determined, and were divided into two groups according to the Ig value of peritoneal fluid β -hCG/ serum β -hCG. Among the patients, 83 cases were pathologically diagnosed with tubal pregnancy or intrauterine pregnancy by laparoscopic operation or curettage, and the correlation between the value of peritoneal fluid β -hCG/ serum β -hCG and the diagnosis was analyzed. **Results:** All the patients with peritoneal fluid β -hCG/ serum β -hCG >1 were tubal pregnancies, and the others with the ratio <1 were intrauterine pregnancies confirmed by the follow up. The peritoneal fluid and serum E_2 , P of patients with tubal pregnancies were significantly lower than those of patients with intrauterine pregnancies, while there were no peritoneal fluid E_2 /serum E_2 nor peritoneal fluid P/serum difference in the two groups. No infection occurred after culdocentesis. **Conclusion:** The value of peritoneal fluid β -hCG/ serum β -hCG is an accurate evidence of the diagnosis of atypical early tubal pregnancy. The peritoneal fluid β -hCG/ serum β -hCG >1 indicates tubal pregnancy, peritoneal fluid β -hCG/ serum β -hCG <1 indicates intrauterine pregnancy. Diagnostic results were totally coincident with pathological result.

Key words: tubal pregnancy; peritoneal fluid; β -hCG; culdocentesis

• 综述 •

精子获能中信号转导途径的研究进展

伍克佳 黄东晖

(华中科技大学同济医学院计划生育研究所, 武汉, 430030)

【摘要】哺乳动物精子获能是精卵成功结合的前提。精子获能时,胞内环磷酸腺苷(cAMP)、环磷酸尿苷(cGMP)浓度显著升高,调节精子活力及顶体反应。精子中cAMP作用于cAMP依赖性蛋白激酶(cAMP dependent protein kinase, PKA),通过蛋白质磷酸化作用传递信息;cGMP与cGMP依赖性蛋白激酶(cGMP dependent protein kinase, PKG)、环核苷酸门控离子通道(cyclic nucleotide gated ion channel, CNG)、磷酸二酯酶(phosphodiesterases, PDEs)等蛋白结合,调控信号通路;Ca²⁺、HCO₃⁻等离子通道同样与精子获能关系密切。

关键词: 精子获能; 腺苷酸环化酶(AC); 鸟苷酸环化酶(GC); Ca²⁺; HCO₃⁻

中图分类号: R715.2

文献标识码: A

文章编号: 0253-357X(2015)07-0472-06

通讯作者: 黄东晖; Tel: +86-18872262607;
E-mail: jhsyyjs@126.com

Advances of signal transduction pathway in sperm capacitation

Ke-jia WU, Dong-hui HUANG

(Family Planning Research Institute of Tongji Medical College, Huazhong University of Science and Technology, Wuhan, 430030)

【ABSTRACT】 Mammalian sperm are required to undergo capacitation before they can undertake the fertilization process. During sperm capacitation, intracellular cyclic nucleotides cAMP, cGMP concentrations were significantly increased, regulating sperm motility and acrosome reaction. cAMP roles on sperm cAMP-dependent protein kinase, transmits information via protein phosphorylation; cGMP binds with cGMP-dependent protein kinase, cyclic nucleotide gated ion channel and phosphodiesterase, regulating signal transduction; Ca^{2+} and HCO_3^- are also closely related with sperm capacitation. This paper aims to review the advances of signal transduction pathway in sperm capacitation.

Key words: sperm capacitation; adenylate cyclase (AC); guanylate cyclase (GC); Ca^{2+} ; HCO_3^-

通讯作者: 黄东晖; Tel: +86-18872262607;
E-mail: jhsyyjs@126.com

不同治疗方案对子宫内膜异位症合并不孕患者生育影响的研究进展

李萌¹ 夏天² 王宝娟²

(1. 天津中医药大学, 天津, 300193)

(2. 天津中医药大学第一附属医院, 天津, 300193)

【摘要】近年来, 子宫内膜异位症(EMs)与不孕的关系受到广泛关注。EMs患者的临床妊娠率明显低于正常女性, 不同的治疗方案对其生育的影响不同。轻度EMs可先期待妊娠, 继而考虑药物、促排卵、手术、辅助生殖技术(ART)等治疗方法; 中、重度EMs期待妊娠率较低, 建议先手术治疗, 手术中应用生育指数(EFI)评分评估患者生育力, 手术后可行期待妊娠或促排卵、ART等方式助孕; 不建议单纯药物治疗及手术后药物治疗。根据患者EMs的程度及EFI评分制定个体化治疗方案, 可以有效提高临床妊娠率。

关键词: 子宫内膜异位症(EMs); 不孕症; 生育

中图分类号: R711

文献标识码: A

文章编号: 0253-357X(2015)07-0478-06

通讯作者: 夏天; Tel: +86-15822238896;

E-mail: xiatian76@163.com

Research progress of the effects of different treatments for endometriosis associated infertility on reproduction

Meng LI¹, Tian XIA², Bao-juan WANG²

(1. *Tianjin University of Traditional Chinese Medicine, Tianjin, 300073*)

(2. *The First Teaching Hospital of Tianjin University of Traditional Chinese Medicine, Tianjin, 300073*)

【ABSTRACT】 In recent years, the relationship between endometriosis (EMs) and infertility has attracted extensive attention. The pregnancy rate of EMs patients is significantly lower than that of fertile women. The way of different treatments could affect their fertility. In infertile women with minimal and mild EMs, clinicians may use expectant management first about 1 year. Women failed to conceive should consider other managements, like medical therapies, controlled ovary hyperstimulation (COH), operative laparoscopy and assisted reproductive technology (ART). Infertile women with moderate to severe EMs have low expectant pregnancy rate, clinicians should use operative laparoscopy first. The EMs fertility index (EFI) predicts pregnancy rates (PRs) in patients with operation. They should use expectant management about 1 year at the most after surgery. Women failed to conceive should consider using ART. It doesn't recommend to use medical therapies only or after surgery. Individual treatment strategies can be made based on the stage of EMs, it can enhance the pregnancy rate.

Key words: endometriosis (EMs); infertility; fertility

女用安全套的种类及国内可接受性研究进展

柏建芸 周宁

(天津市疾病预防控制中心, 天津, 300171)

【摘要】女用安全套根据原材料可以分为聚氨酯、天然橡胶及合成橡胶3类。目前女用安全套在中国的使用并不广泛。娱乐场所女性性工作者对女用安全套的防病与避孕的功能有着较高的认同,但因使用感受等因素使使用率较低。而夫妻使用女用安全套熟练后,放入更容易,不良反应发生率更低;金钱男孩(money boy, MB)的女用安全套使用率高于普通男男同性性行为者。影响女用安全套使用的因素包括产品外观及使用感受、人口学因素、性对象的配合及社会支持市场营销等多方面。应该改进产品,扩大宣传、降低价格,开发可行的推广模式促进女用安全套的使用。

关键词: 女用安全套; 可接受性; 影响因素

中图分类号: R169.41

文献标识码: A

文章编号: 0253-357X(2015)07-0484-05

通讯作者: 柏建芸; Tel: +86-22-24333419;
E-mail: bjj722@sina.com

Female condom type and domestic acceptability research progress

Jian-yun BAI, Ning ZHOU

(Tianjin Centers for Disease Control and Prevention, Tianjin, 300171)

【ABSTRACT】 The female condom can be divided into polyurethane, natural rubber and synthetic rubber according to raw material. At present, the female condoms are not widely used in China. The female sex workers have a high recognition on the functions of disease prevention and contraception, but have the low rate of use because of the feel and other factors. After using skilled, couples use the female condom more easily and have lower adverse reaction. Money boys have higher use rate of female condom than ordinary men who have sex with men. The influence factors of female condom use include product appearance and use experience, demographic factors, sexual object, social support and marketing. We should promote the use of female condoms by improving the products, expanding publicity, reducing prices and developing feasible model.

Key words: female condom; acceptability; influence factors

通讯作者: 柏建芸; Tel: +86-22-24333419;
E-mail: bjj722@sina.com

• 临床报道 •

特发性男性不育症患者精子功能检测的临床分析

张艳萍 张丽红 邱毅

(国家卫计委生育调控技术重点实验室, 山东省优生技术重点实验室, 山东省计划生育科学技术研究所, 济南, 25000)

【摘要】目的: 探讨特发性男性不育症的病因。方法: 收集30例特发性男性不育症患者(病例组)和30例已生育的成年健康男性(对照组)的精液, 同时应用伊红染色法检测精子膜结构完整性, 应用精子染色质扩散实验(SCD)检测精子DNA完整性, 应用凝集素免疫荧光染色法(PNA-FITC)检测精子顶体完整性, 利用JC-1荧光探针检测精子线粒体膜电位去极化情况。结果: 病例组精子顶体完整百分率为(35.15 ± 11.28)%, 低于对照组(50.20 ± 12.34)%, 差异有统计学意义($P < 0.05$)。病例组与对照组精子伊红染色率、DNA碎片率及线粒体膜电位去极化情况差异无统计学意义($P > 0.05$)。结论: 精子顶体完整性检测对部分特发性男性不育症患者的诊疗有重要的临床意义。

关键词: 特发性男性不育症; 精子顶体完整性; 精子DNA碎片率; 精子线粒体膜电位

中图分类号: R446.9

文献标识码: A

文章编号: 0253-357X(2015)07-0489-05

本研究为山东省计生委科技发展项目, 项目号: 2011(16)

通讯作者: 张丽红; Tel: +86-13791033241;

E-mail: sddx308@163.com

Clinical analysis of sperm function in patients with unexplained infertility

Yan-ping ZHANG, Li-hong ZHANG, Yi QIU

(*State Key Laboratory of Reproductive Regulation Technology, Shandong Provincial Key Laboratory of Eugenic Technology, Shandong Planned Parenthood Institute of Science and Technology, Jinan, 250002*)

【ABSTRACT】 Objective: To explore the male factor of unexplained infertility. **Methods:** Thirty semen samples from the unexplained infertility patients (case group) or normal fertile men (control group) were divided into four aliquots for examining the sperm cell membrane integrity, DNA integrity, acrosome integrity and mitochondrial membrane potential depolarization. **Results:** The sperm acrosome integrity of case group was significantly lower than that in control group, while no significant difference was found in sperm membrane integrity, DNA integrity and mitochondrial membrane potential depolarization between the case and control groups. **Conclusion:** The detection of sperm acrosome integrity has an important clinical significance in patients with unexplained infertility.

Key words: unexplained infertility; sperm acrosome integrity; sperm DNA integrity; sperm mitochondrial membrane potential

本研究为山东省计生委科技发展项目, 项目号: 2011(16)
通讯作者: 张丽红; Tel: +86-13791033241;
E-mail: sddx308@163.com

冻融囊胚移植降低重复性异位妊娠发生

殷宝莉 韦多 张少娣 郝好英 王淑娜 张翠莲

(郑州大学人民医院, 河南省人民医院生殖医学研究所, 郑州, 450003)

【摘要】目的: 探讨重复性异位妊娠的发生与移植日胚胎发育天数的关系。方法: 回顾性分析 741 个冻融胚胎移植(FET)周期且有明确异位妊娠病史患者的临床资料。按胚胎体外培养时间分为卵裂组, 复融第 3 日胚胎($n=458$); 囊胚组, 复融第 5 或第 6 日囊胚($n=283$)。比较组间患者的一般情况及治疗情况。结果: 组间患者的平均年龄、平均不孕年限、既往异位妊娠病史、输卵管手术史、内膜准备方案、内膜厚度等差异无统计学意义($P>0.05$), 囊胚组平均移植胚胎数低于卵裂组(1.9 ± 1.3 vs 2.0 ± 0.5 , $P<0.05$), 临床妊娠率、双胎妊娠率囊胚组高于卵裂组(75.97% vs 42.36% , 57.20% vs 31.40% , $P<0.05$), 流产率、重复异位妊娠率囊胚组低于卵裂组(6.97% vs 16.49% , 0.82% vs 5.15% , $P<0.05$)。结论: 有异位妊娠病史的患者, 囊胚移植可降低重复异位妊娠的发生风险。

关键词: 胚胎移植; 重复异位妊娠(REP); 胚胎发育

中图分类号: R714.4+1

文献标识码: A

文章编号: 0253-357X(2015)07-0494-04

通讯作者: 张翠莲; Tel: +86-13598836086;
E-mail: zcl6086@gmail.com

Frozen-thawed blastocyst transfer could reduce the incidence of repeated ectopic pregnancy

Bao-li YIN, Duo WEI, Shao-di ZHANG, Hao-ying HAO, Shu-na WANG, Cui-lian ZHANG

(Reproductive Institute, the People's Hospital of Zhengzhou University; Henan Provincial People's Hospital, Zhengzhou, 450003)

【ABSTRACT】 Objective: To explore the relationship between the occurrence of repeated ectopic pregnancy (REP) with developmental days of embryos. **Methods:** A total of 741 frozen-thawed embryo transfer (FET) cycles were collected in which all the patients had a history of ectopic pregnancy (EP). According to the days of embryo development, the patients were divided into cleavage group ($n=458$) with day 3 embryo transfer and blastocyst group ($n=283$) with day 5/6 blastocyst transfer. Age, duration of infertility, medical history of oviduct operations, protocol, endometrial thickness, the number of transferred embryos, multiple pregnancy rate, abortion rate and EP rate were compared between the two groups. **Results:** There was no significant difference in age, duration of infertility, history of EP, endometrium preparation protocol, medical history of oviduct operations and endometrial thickness at the start of progesterone ($P>0.05$). The number of transferred embryos was significantly lower in the blastocyst group than in cleavage group (1.9 ± 1.3 vs 2.0 ± 0.5 , $P<0.05$). Clinical pregnancy rate and twin pregnancy rate were significantly higher in the blastocyst group than in cleavage group (75.97% vs 42.36% , 57.20% vs 31.40% , $P<0.05$). REP rate and miscarriage rate were significantly lower in blastocyst group than in cleavage group (6.97% vs 16.49% , 0.82% vs 5.15% , $P<0.05$). **Conclusion:** Blastocyst transplantation could reduce the risk of REP for patients with history of ectopic pregnancy.

Key words: embryo transfer (ET); repeated ectopic pregnancy (REP); embryo development

输卵管结核的子宫输卵管造影表现

张海霞¹ 孙明华¹ 朱家樑¹ 尤小芳²

(1. 同济大学附属第一妇婴保健院放射科, 上海, 201204)

(2. 同济大学附属上海市肺科医院放射科, 上海, 200433)

【摘要】目的: 输卵管结核的子宫输卵管造影(HSG)表现。方法: 对经宫-腹腔镜、刮除活检、组织学检查、细菌培养、PCR及病理证实的22例输卵管结核病例进行回顾性分析, 总结其子宫输卵管造影表现。结果: 输卵管结核的HSG表现各异, 如输卵管积水、阻塞、周围粘连以及输卵管管腔呈串珠状、高尔夫球棒状、烟斗柄状、鹅卵石状以及豹皮状改变, 而输卵管特异性形态改变常常高度提示输卵管结核的存在。结论: HSG是一种诊断输卵管结核的重要检查方法, 与其他疾病相鉴别并指导临床进行及时干预和治疗。

关键词: 女性生殖系统结核; 子宫输卵管造影(HSG); 输卵管

中图分类号: R711.3; R814.4 文献标识码: A 文章编号: 0253-357X(2015)07-0498-06

Hysterosalpingographic appearances of tubal tuberculosis

Hai-xia ZHANG¹, Ming-hua SUN¹, Jia-liang ZHU¹, Xiao-fang YOU²

(1. Department of Radiology, Shanghai First Maternity and Infant Hospital, Tongji University School of Medicine, Shanghai, 201204)

(2. Department of Imaging, Shanghai Pulmonary Hospital Affiliated to Tongji University, Shanghai, 200433)

【ABSTRACT】Objective: To evaluate the hysterosalpingographic manifestations of tubal tuberculosis on hysterosalpingograph (HSG). **Methods:** A total of 22 cases of tubal tuberculosis were included in this study, which were proved by hysteroscopy-laparoscopy, curettage biopsy, histologic examination, culture, polymerase chain reaction, or pathobiology. The HSG findings of tubal tuberculosis were analyzed. **Results:** Hysterosalpingographic findings of tubal tuberculosis varied from hydrosalpinx, occlusion, peritubal adhesion to specific pattern such as “beaded tube”, “golf club tube”, “pipestem tube”, “cobble stone tube” and the “leopard skin tube”, and the latter features may be non-specific for tuberculosis but were highly suggestive of tubal tuberculosis. **Conclusion:** HSG is considered as an important diagnostic tool of tubal tuberculosis, which can be considered in differential diagnosis of the causes of infertility and timing intervention and treatment.

Key words: female genital tuberculosis (FGTB); hysterosalpingography (HSG); fallopian tube

通讯作者: 孙明华; Tel: +86-18621007365;

E-mail: sunminghua625@aliyun.com

• 讲座 •

克罗米芬在体外受精-胚胎移植方案中的应用

门鸿芹 范莹露 腊晓琳

(新疆医科大学第一附属医院生殖助孕中心, 乌鲁木齐, 830000)

【摘要】 克罗米芬(CC)应用于体外受精-胚胎移植(*in vitro* fertilization and embryo transfer, IVF-ET)的促排卵方案中, 比常规方案更简单、方便、经济, 可重复性高。但CC对子宫内膜的负面影响, 使其在IVF中的应用受到限制, 而针对这些负面影响采取的改善措施是否有效, 也存在争议。CC应用于微刺激方案中与常规促排卵方案比较, 减少了Gn用量, 缩短了Gn天数, 减少了卵巢过度刺激综合征(OHSS)的发生, 在微刺激方案中, 促排卵后期加用CC能够更好地改善抗雌激素作用及抑制LH峰, 降低周期取消率, 获得较多的卵子及较好的子宫内膜厚度。

关键词: 克罗米芬(CC); 体外受精-胚胎移植(IVF-ET); 子宫内膜

中图分类号: R711.6

文献标识码: A

文章编号: 0253-357X(2015)07-0504-05

通讯作者: 腊晓琳; Tel: +86-13999232905;
E-mail: xiaolinla@hotmail.com

Application of clomiphene citrate *in vitro* fertilization and embryo transplantation

Hong-qin MEN, Ying-lu FAN, Xiao-lin LA

(Reproduction Center of the First Affiliated Hospital of Xinjiang Medical University, Xinjiang, 830011)

【ABSTRACT】 Clomiphene citrate (CC) is more simple, convenient and economic than other ovulation induction in *in vitro* fertilization and embryo transfer (IVF-ET). Because of the negative impact on endometrium, the application development of CC in IVF is restricted. As regard to whether or not the measures are effective, it is also a matter of debate. To compared with conventional stimulate ovulation, the micro stimulate ovulation with CC can reduce the incidence of ovarian hyperstimulation syndrome (OHSS) and the Gn dosage and the Gn used days. The stimulate ovulation later period with CC can improve the anti-estrogen effect, the inhibition of LH peak, reduce the cycle cancellation rate, get more eggs and appropriate endometrial thickness.

Key words: clomiphene citrate (CC); *in vitro* fertilization and embryo transfer (IVF-ET); endometrium