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妊娠合并甲状腺功能亢进症对妊娠及围生儿结局的影响

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摘要 目的:研究妊娠合并甲状腺功能亢进症(甲亢)对妊娠及围生儿结局的影响。**方法:**收集从2011年1月到2014年2月我院收治的110例妊娠合并甲亢的患者的临床资料(40例未治疗,70例接受治疗)和90例正常健康孕妇的临床资料,记录三组孕妇的妊娠结局及新生儿结局,比较其结果有无统计学差异。**结果:**未治疗组妊娠不良结局及围生儿不良结局的发生率均高于治疗组,差别有统计学意义($P<0.05$);而治疗组与对照组相比,差异均无统计学意义($P>0.05$)。**结论:**妊娠合并甲亢可给母婴带来严重危害,早期进行规律化治疗可减少不良事件的发生。

关键词:妊娠;甲状腺功能亢进;围生儿;结局

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The Effects of Pregnancy with Hyperthyroidism on the Outcome of Pregnancy and Perinatal Infants

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ABSTRACT Objective: To study the effects of pregnancy with hyperthyroidism on the outcome of pregnancy and perinatal infants. **Method:** Clinical information of 110 patients of pregnancy with hyperthyroidism who had been treated in our hospital from January 2011 to February 2014 (40 untreated, 70 treated) was collected, and 90 healthy pregnant women's clinical information was also collected, the maternal outcomes and perinatal infant outcomes of the 3 groups were recorded and compared. **Result:** The incidences of adverse maternal and perinatal infant outcome of the untreated group were higher than those of the treated group respectively, and the differences were statistically significant ($P<0.05$); comparison of treated group and control group showed that there was no statistical significance ($P>0.05$). **Conclusion:** Pregnancy with hyperthyroidism is dangerous for both mom and infant, and early treatment will reduce the occurrence of adverse events.

Key words: Pregnancy; Hyperthyroidism; Perinatal infant; Outcomes

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前言

甲状腺功能亢进是一种常见的甲状腺疾病,是指甲状腺分泌的甲状腺素过多或者血液循环中甲状腺素浓度升高的内分泌疾病,好发于育龄期妇女^[1,2]。随着临床医学的发展,妊娠合并甲亢对孕妇的危害逐渐被发现并受到重视。妊娠合并轻度甲亢对母婴的危害不大,但是重度甲亢会导致流产、早产及死胎的不良妊娠结局及低出生体重儿、新生儿甲状腺疾病等不良新生儿结局,严重威胁到孕妇及新生儿的生命安全^[2-4]。因此,对于妊

娠合并甲亢患者,及早积极治疗产后密切监视控制病情从而尽量减少妊娠合并甲亢带来的危害^[5,6]。本研究利用110例妊娠合并甲亢患者的临床资料进行回顾性分析与正常健康妊娠患者的临床资料进行比较,进而探讨妊娠合并甲亢对妊娠及围生儿结局的影响,并分析规律化治疗对改善妊娠合并甲亢所导致的不结局的作用,为临床改善妊娠合并甲亢患者的预后提供理论支持。

1 资料与方法

1.1 对象选择

选取从2011年1月到2014年2月我院住院收治的110例原有甲亢病史或者妊娠期间诊断为甲亢的孕妇,年龄21-35岁,平均年龄 (27.5 ± 5.6) 岁,其中妊娠前诊断为甲亢的74例,怀孕后诊断为甲亢的有36例,根据是否接受治疗分为治疗组

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(70例)和非治疗组(40例),所有患者除甲亢外均无其他慢性疾病。另外选取同期正常健康孕妇90例作为对照。排除临床资料不全等患者。所有孕妇均为单胎头位初产妇。三组患者年龄等分布差异无统计学意义,资料均衡可比。

1.2 方法

回顾性分析110例妊娠合并甲亢患者及90例正常健康孕妇的病历资料,记录三组孕妇妊娠结局,包括妊娠期高血压、甲亢性心脏病、流产、早产、胎膜早破、产后出血,并记录三组孕妇所产新生儿的结局,包括低体重儿、新生儿窒息、新生儿甲亢及新生儿甲低等的发生情况,比较三组孕妇各不良妊娠结局及新生儿结局有无统计学差异。

1.3 统计学分析

计量资料以均数 $\pm$ 标准差($\bar{x} \pm s$)表示;三组资料比较时采用方差分析及卡方分析。采用SPSS 18.0统计软件进行统计分析,检验水准 $\alpha=0.05$ 。

2 结果

2.1 一般临床资料

三组患者年龄、BIM等一般临床资料对比检验差别没有统计学意义($P>0.05$),治疗组与未治疗组甲亢分级诊断时间的差异无统计学意义,资料均衡可比。详见表1。

表1 三组患者一般临床资料比较

Table 1 Comparison of the general clinical data among three groups

指标 Indexes	未治疗组(n=40) Untreated group (n=40)	治疗组(n=70) Treated group (n=70)	对照组(n=90) Control group (n=90)	F/ χ^2	P
年龄 Age	27.1 $\pm$ 1.2	27.8 $\pm$ 2.3	27.2 $\pm$ 2.2	2.125	0.122
BIM($\bar{x} \pm s$)	24.1 $\pm$ 1.6	23.8 $\pm$ 2.1	23.9 $\pm$ 2.3	0.258	0.773
甲亢分级 Hyperthyroidism classification	轻度 Mild 20 中度 Moderate 14 重度 Severe 6	42 16 12	- - -	1.899	0.387
妊娠前 诊断时间 The time of diagnosis	Before pregnancy 25 妊娠后 15 After pregnancy	50 20	- -	0.935	0.333

2.2 三组孕妇妊娠结局及分娩方式比较

由表2可知:未治疗组妊娠不良结局(妊娠高血压、甲亢性心脏病、甲亢危象、流产、早产、胎膜早破、产后出血及剖宫产)的

发生率均高于治疗组,差别有统计学意义($P<0.05$);而治疗组与对照组相比,差异均无统计学意义($P>0.05$)。

表2 三组孕妇妊娠结局及分娩方式比较[n(%)]

Table 2 Comparison of pregnancy outcomes and delivery modes among three groups [n(%)]

指标 Indexes	未治疗组(n=40)a) Untreated group(n=40)a)	治疗组(n=70) Treated group(n=70)	对照组(n=90)b) Control group(n=90)b)	χ^2	P
妊娠高血压 Hypertension of pregnancy	11(27.50)	4(5.71)	2(2.22)	18.856*	<0.001
甲亢心脏病 Hyperthyroid heart disease	7(17.50)	0(0.00)	0(0.00)	19.393*	<0.001
甲亢危象 Hyperthyroidism crisis	2(5.00)	0(0.00)	0(0.00)	4.894*	0.037
流产 Abortion	5(12.50)	0(0.00)	0(0.00)	13.127*	<0.001
早产 Premature birth	12(30.00)	5(7.14)	7(7.78)	12.582*	0.001
胎膜早破 Premature rupture of membranes	7(17.50)	2(2.86)	2(2.22)	10.446*	0.004
产后出血 Postpartum hemorrhage	5(12.50)	0(0.00)	0(0.00)	13.127*	<0.001
剖宫产 C-sect	27(67.50)	24(34.29)	29(32.22)	15.825	<0.001

注:*Fisher 精确概率法

a) 未治疗组与治疗组比较,差异有统计学意义($P<0.05$)

b) 对照组与治疗组比较,差异均无统计学意义($P>0.05$)

Note: *Fisher exact probability

a)untreated group compared with treated group, the difference was statistically significant($P<0.05$)

b)control group compared with treated group, the difference had no statistical significance($P>0.05$)

2.3 三组孕妇所产新生儿围生期结局比较

未治疗组的新生儿围生期不良结局(低出生体重、新生儿窒息、新生儿甲亢、新生儿甲低)的发生率均高于治疗组,差异

均有统计学意义($P<0.05$);治疗组与对照组相比差异均无统计学意义($P>0.05$)。见表3。

表3 三组孕妇所产新生儿围生期结局比较[n(%)]
Table 3 Comparison of perinatal outcomes among three groups [n(%)]

指标 Indexes	未治疗组(n=40) ^{a)} Untreated group (n=40) ^{a)}	治疗组(n=70) Treated group(n=70)	对照组(n=90) ^{b)} Control group(n=90) ^{b)}	χ^2	P
低出生体重 Low birth weight	15(37.50)	4(5.71)	5(5.55)	24.066*	<0.001
新生儿窒息 Neonatal asphyxia	7(17.50)	4(5.71)	4(4.44)	6.150*	0.041
新生儿甲亢 Neonatal hyperthyroidism	5(12.50)	1(1.43)	0(0.00)	11.238*	0.001
新生儿甲低 Neonatal hypothyroidism	5(12.50)	1(1.43)	0(0.00)	11.238*	0.001

*Fisher 精确概率法;a)未治疗组与治疗组比较,差异有统计学意义($P<0.05$);b)对照组与治疗组比较,差异均无统计学意义($P>0.05$)

*Fisher exact probability;a)untreated group compared with treated group,the difference was statistically significant ($P<0.05$);b)control group compared with treated group,the difference had no statistical significance($P>0.05$)

3 讨论

妊娠合并甲亢是指妊娠前诊断的甲亢或者妊娠过程中初次诊断的甲亢,妊娠合并甲亢的主要发病原因有自身免疫性疾病、亚急性甲状腺炎、桥本甲状腺炎等。在育龄期妇女中的发病率虽然较低,但是其发病率逐年升高,而且妊娠合并甲亢是高危妊娠的一种,一旦发病将严重危险孕妇及胎儿或者新生儿的生命安全,给患者及其家庭带来沉重的负担^[7,9]。因此应该引起临床医师的高度重视,应尽早识别妊娠期甲亢,及时给予适当有效的治疗控制病情,从而减少不良妊娠结局及围生儿结局的发生,如未能控制病情将导致甲亢危象等严重后果^[10,11]。本研究主要利用110例妊娠合并甲亢患者的临床资料及90例正常健康孕妇的临床资料探讨早期规律化治疗对控制妊娠合并甲亢患者病情的重要性,进而为临床治疗提供一定的理论基础。

本次研究结果发现,未治疗组妊娠不良结局(妊娠高血压、甲亢心脏病、甲亢危象、流产、早产、胎膜早破、产后出血及剖宫产)的发生率均高于治疗组($P<0.05$),而治疗组与对照组相比,差异均无统计学意义($P>0.05$),这与已有的研究结果相近^[3,12-14],提示经过良好的规范化治疗的妊娠期甲亢对妊娠结局的影响不大,但是甲亢病情未经治疗的患者就易导致流产、早产、甲亢危象等不良妊娠结局的产生,主要原因是患者体内甲状腺素浓度增高,对垂体产生负反馈调节,抑制机体三羧酸循环,使机体能量代谢受抑制,导致胎儿能量供应不足从而早产,并且过多的甲状腺激素还会增加神经肌肉的兴奋性,导致血管发生痉挛,宫缩加强,发生流产、早产、死胎、妊娠期高血压及先兆子痫、胎盘早剥、产后出血等不良结局^[15-17]。另外,未治疗组的新生儿围生期不良结局(低出生体重、新生儿窒息、新生儿甲亢、新生儿甲低)的发生率均高于治疗组, ($P<0.05$),而治疗组与对照组相比差异均无统计学意义($P>0.05$),提示未受控制的甲亢会严重影响新生儿的围生期结局,而已得到良好控制的甲亢则对

新生儿无明显影响,主要原因是甲亢孕妇不能为新生儿提供充足的能量,因此导致低出生体重的发生,另外,母体的家甲状腺素浓度及甲状腺素受体直接影响胎儿的甲状腺的发育,甲状腺素受体可通过胎盘到达胎儿体内,因此可导致胎儿甲状腺亢进或者低下的发生^[17-20]。

总而言之,妊娠合并甲亢会给母婴均带来严重的损害,尽早发现并及时给予规范化治疗将有效降低其对母婴所带来的影响,减少不良结局的发生。

参考文献(References)

- [1] Aggarawal N, Suri V, Singla R, et al. Pregnancy outcome in hyperthyroidism: a case control study [J]. Gynecol Obstet Invest, 2014,77(2):94-99
- [2] 陈丽军,侯登华,许晓燕,等.放射性¹³¹I治疗甲状腺功能亢进症132例短期疗效观察[J].宁夏医科大学学报,2012,34(8):805-806
Chen Li-jun, Hou Deng-hua, Xu Xiao-yan, et al. the short-term effect of radioactive ¹³¹I in treatment for 132 cases of hyperthyroidism[J]. Journal of Ningxia Medical University,2012,34(8):805-806
- [3] Lazarus J H. Management of hyperthyroidism in pregnancy [J]. Endocrine,2014,45(2):190-194
- [4] Boufettal H, Mahdoui S, Noun M, et al. Hyperthyroidism in molar pregnancy[J]. Rev Med Interne, 2014,35(3):202-205
- [5] Earl R, Crowther C A, Middleton P. Interventions for hyperthyroidism pre-pregnancy and during pregnancy[J]. Cochrane Database Syst Rev, 2013,11:D8633
- [6] Amerion M, Tahajjodi S, Hushmand Z, et al. The effect of maternal thyroid disorders (hypothyroidism and hyperthyroidism) during pregnancy and lactation on skin development in wistar rat newborns [J]. Iran J Basic Med Sci,2013,16(5):665-674
- [7] 赵艳琼. 妊娠合并甲状腺功能亢进的妊娠结局分析 [J]. 广西医学, 2007,29(2):240-241
Zhao Yan-qiong. Analysis of pregnancy outcome of pregnant with

- hyperthyroidism[J].Guangxi Medical Journal,2007,29(2):240-241
- [8] Gargallo F M. Hyperthyroidism and pregnancy [J]. Endocrinol Nutr, 2013,60(9):535-543
- [9] De Groot L J, Mestman J. Patient guide to detecting and treating hyperthyroidism before, during, and after pregnancy [J]. J Clin Endocrinol Metab,2012,97(8):A37-A38
- [10] Bilir B E, Atile N S, Kirkizlar O, et al. Effectiveness of preoperative plasmapheresis in a pregnancy complicated by hyperthyroidism and anti-thyroid drug-associated angioedema [J]. Gynecol Endocrinol, 2013,29(5):508-510
- [11] Bolz M, Korber S, Schober H C. TSH secreting adenoma of pituitary gland (TSHom) - rare cause of hyperthyroidism in pregnancy[J]. Dtsch Med Wochenschr,2013,138(8):362-366
- [12] Caron P. Treatment of hyperthyroidism due to Graves' disease: what is the recommended antithyroid drug during pregnancy?[J]. J Gynecol Obstet Biol Reprod (Paris),2013,42(3):232-237
- [13] Stagnaro-Green A. Overt hyperthyroidism and hypothyroidism during pregnancy[J]. Clin Obstet Gynecol,2011,54(3):478-487
- [14] Fumarola A, Di Fiore A, Dainelli M, et al. Therapy of hyperthyroidism in pregnancy and breastfeeding [J]. Obstet Gynecol Surv,2011,66(6):378-385
- [15] Goldman A M, Mestman J H. Transient non-autoimmune hyperthyroidism of early pregnancy [J]. J Thyroid Res,2011,2011: 142413
- [16] Negro R, Beck-Peccoz P, Chiovato L, et al. Hyperthyroidism and pregnancy. An Italian Thyroid Association (AIT) and Italian Association of Clinical Endocrinologists (AME) joint statement for clinical practice[J]. J Endocrinol Invest,2011,34(3):225-231
- [17] Azizi F, Amouzegar A. Management of hyperthyroidism during pregnancy and lactation[J]. Eur J Endocrinol,2011,164(6):871-876
- [18] Hamada N, Momotani N, Ishikawa N, et al. Persistent high TRAb values during pregnancy predict increased risk of neonatal hyperthyroidism following radioiodine therapy for refractory hyperthyroidism[J]. Endocr J,2011,58(1):55-58
- [19] Luewan S, Chakkabut P, Tongsong T. Outcomes of pregnancy complicated with hyperthyroidism: a cohort study [J]. Arch Gynecol Obstet,2011,283(2):243-247
- [20] Cassina M, Dona M, Di Gianantonio E, et al. Pharmacologic treatment of hyperthyroidism during pregnancy [J]. Birth Defects Res A Clin Mol Teratol,2012,94(8):612-619

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- Hu Yi-min. Radiation Oncology Physics [M]. Beijing:Atomic Energy Press, 1999: 595-598
- [11] 戴建荣, 胡逸民. 图像引导放疗的实现方式[J]. 中华放射肿瘤学杂志, 2006,15(2):132-135
- Dai Jian-rong, Hu Yi-min. Implement of Image-guided radiation therapy[J]. Chin J Radiat Oncol,2006,15(2):132-135
- [12] 杨波, 邱杰, 王欣海, 等. OBI 系统在放射治疗摆位中的临床应用[J]. 中国医学装备,2008,5(8):1-4
- Yang Bo, Qiu Jie, Wang Xin-Hai, et al. OBI Clinical Application In setup Error[J]. China Medical Equipment,2008,5(8):1-4
- [13] 刘利彬, 吴君心, 瞿宜艳, 等. 千伏及锥形束 CT 与兆伏级电子摄影影像系统在鼻咽癌影像引导放疗的对比研究[J]. 中国医学物理学杂志,2012,29(8):3721-3741
- Liu Li-bin, Wu Jun-xin, Qv Yi-yan, et al. Reserch and Compare the Application of the Electronic Portal Imaging Device and Cone-beam CT in IGRT for Nasopharyngeal Carcinoma Patients[J]. Chinese Journal of Medical Physics,2012,29(8):3721-3741
- [14] 黄炎秋, 周春骏, 于忠全, 等. 鼻咽癌调强放疗摆位误差分析[J]. 中国实用医刊,2013,40(21):109-110
- Huang Yan-qiu, Zhou Chun-jun, Yu Zhong-quan, et al. Analyze the serup error in intensity modulated radiation therapy for nasopharyngeal carcinoma [J]. Chinese Journal of Practical Medicine,2013,40(21):109-110
- [15] 曲颂. 锥形束 CT 图像引导在头颈部及胸腹部肿瘤放射治疗中的应用[D]. 南宁:广西医科大学,2011:1-22
- Qu Song. Application of Cone-beam Computed Tomography to Radiotherapy for Head-and-neck Tumor, Thoracic Tumor and Abdominal Tumor[D]. Nanning:Guangxi Medical University,2011:1-22
- [16] 李庆瑞, 周元成. CBCT 技术在精确放疗中的应用[J]. 基础医学论坛,2011,15:879-881
- Li Qing-rui, Zhou Yuan-cheng. Applications of cone beam computed tomography technique in accurate radiotherapy[J]. Public Medical Forum Magazine,2011,15:879-881
- [17] Van Lin EN, van der Vight L, Huizenga H, et al. Set-up improvement in head and neck radiotherapy using a 3D off-line EPID-based correction protocol and a customized head and neck support[J]. Radiother Oncol,2003,68(2):137-148
- [18] ICRU Report 50:Prescribing,recording and reporting photon beam therapy[R]. 1993:1-52
- [19] ICRU Report 62:Prescribing,recording and reporting photon beam therapy(Supplement to ICRU Report 50) [R].1999,33:1-52
- [20] 王骁踊, 刘晖, 谢丛华, 等. 鼻咽癌临床靶区及危及器官计划体积的确定[J]. 武汉大学学报(医学版),2013,34(6):866-868,871
- Wang Xiao-yong, Liu Jun, Xie Cong-hua, et al. Planning Volume's Determination for Clinical Target Regions and Organs at Risk Before Radiotherapy of Nasopharyngeal Carcinoma [J]. Medical Journal of Wuhan University,2013,34(6):866-868,871
- [21] 胡永, 曾昭冲, 张建英, 等. 头颈部肿瘤螺旋断层放疗中的 CTV-PTV 边界大小分析[J]. 实用肿瘤杂志,2012,27(4):411-414
- Hu Yong, Zeng Shao-chong, Zhang Jian-ying, et al. Margin between clinical target volume and planning target volume in helical tomotherapy for head and neck cancer [J]. Journal of Practical Oncology, 2012,27(4):411-414