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200 例妊娠期糖尿病临床分析

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摘要 目的: 回顾性研究妊娠期糖尿病产妇孕中晚期及新生儿并发症情况,以加深对妊娠期糖尿病的认识,完善孕期管理,避免或减少并发症的发生,保证母婴安全。**方法:** 随机抽取 2011 年 1 月至 2012 年 12 月在我院住院生产的 200 名妊娠期糖尿病产妇,其中在我院产检并接受管理的产妇 138 例为观察组,没有经过我院糖尿病管理的 62 例产妇为对照组,分析两组并发症发生情况。**结果:** 观察组中 51 例产妇发生并发症(37.0%),新生儿 21 例(占 15.2%);对照组中产妇发生并发症 50 例(占 80.6%),新生儿 23 例(占 37.1%),经糖尿病管理和治疗的观察组孕产妇出现的并发症明显比没有经过管理的对照组孕产妇出现的并发症少(如妊娠期高血压疾病、产后感染、酮症酸中毒、羊水过多、早产、巨大儿、低出生体重儿、死胎、畸形、呼吸窘迫综合征等),结果具有统计学意义。**结论:** 需要重视妊娠期糖尿病,加强妊娠期糖尿病孕期管理是减少妊娠期糖尿病并发症的有效措施。

关键词: 妊娠期糖尿病;妊娠并发症;糖尿病管理

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Clinical Analysis of 200 Cases of Gestational Diabetes

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ABSTRACT Objective: A retrospective study was conducted on complications occurred during middle-late pregnancy of maternal gestational diabetes mellitus (GDM) and on their newborn to deepen and improve the understanding and management of gestational diabetes, and to avoid or reduce the occurrence of complications in order to ensure the safety of maternal and infants. **Methods:** 200 maternal cases with GDM hospitalized for delivery in our hospital from January 2011 to December 2011 were randomly enrolled into the study. Among them, 138 cases undergoing antenatal care and management were chosen as observation group and 62 cases without diabetes management of our hospital as control group. The complications of the two groups were analyzed. **Results:** In observation group, 51 maternal cases (37.0%) and 21 neonatal cases (15.2%) occurred complications. 50 maternal cases (80.6%) and 23 neonatal cases (37.1%) occurred complications in control group. The occurrence of complications such as gestational hypertension, postpartum infection, ketoacidosis, hydramnios, premature birth, macrosomia, low birth weight, dead fetus, deformities, respiratory distress syndrome in observation group was obviously less than that in control group. **Conclusion:** Great attention should be paid to GDM and strengthen GDM management is an effective way to reduce the occurrence of complications.

Key words: Gestational diabetes mellitus; Complication; Diabetes management

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前言

妊娠期糖尿病(gestational diabetes mellitus, GDM)是妊娠期间发现或发病的由不同程度糖耐量异常及糖尿病引起的不同程度的高血糖^[1]。GDM 是妇女妊娠期常见的并发症之一,是高危妊娠疾病,发病率约为 1%~5%^[2]。GDM 对孕妇的影响主要是糖尿病酮症酸中毒发生率增高、糖尿病性神经损害加重等,对胎儿的危害主要是导致畸形儿、巨大胎儿发生率和胎儿及新生儿死亡率增高,因此严重危害孕妇和新生儿的健康^[3,4]。GDM 对产妇及其后代还具有长远的危害,高达 40%的 GDM 患者产后 20 年内可发展 2 型糖尿病^[5]。

近年来,随着人们生活水平的提高以及生活条件的改善,

营养大量摄入,GDM 患病率逐年增高,对孕妇及新生儿的健康造成巨大影响^[6]。我们对 2011 年 1 月至 2012 年 12 月在我院住院生产的 200 名诊断为妊娠期糖尿病的孕妇出现并发症的情况作分析,结果如下:

1 资料与方法

1.1 临床资料

随机抽取 2011 年 1 月至 2012 年 12 月在海南现代妇婴医院诊断为妊娠期糖尿病的 200 名产妇病例。年龄在 18-40 岁,平均 26.5 岁;初产妇占 46.3%,经产妇占 53.7%;身高在 148-170 cm 之间,平均身高 158 cm;孕前体重在 60-98 kg 之间,平均 75 kg。其中,美国 2 人,日本 1 人,韩国 1 人,前苏联 1 人,非洲黑人 1 人,排除妊娠期前患有糖尿病、甲状腺功能亢进等内分泌疾病病人。观察组与对照组病例中以上因素经 χ^2 检验, $P>0.05$,均无统计学差异。

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1.2 研究方法

前一日晚餐后禁食至少 8 h 至次日晨(最迟不超过上午 9 h)行 OGTT 试验。OGTT 检查应在孕 24-28 周时进行,但有些来我院产检的孕妇已经错过了这个最佳时期,为避免漏诊,故放宽时间限制,将已超过孕 28 周既往未行此检查的都补上此检查。鉴于部分孕妇的依从性较差,故直接将口服 75 g 葡萄糖的 OGTT 试验作为产检的一项常规检查。

1.2.1 诊断标准 诊断标准采用 2011 年国际妊娠期糖尿病研究协会(IADPSG)GDM 诊断标准^[7]:孕妇 24~28 周(孕前糖尿病除外)行口服 75 g 无水葡萄糖糖耐量试验(75 gOGTT),界值为:空腹血糖 5.1 mmol/L,1 h 血糖 10.0 mmol/L,2 h 血糖 8.5 mmol/L,若其中一项及以上异常,则诊断为 GDM。

1.2.2 GDM 管理和治疗 对中期妊娠诊断为 GDM 的孕妇,中孕时每 1-2 周产检 1 次,28-30 周后每周产检一次,36 周后每周产检 2 次^[8]。管理治疗的主要方式是在专业营养师指导下控制饮食和加强运动。为掌握患者管理治疗过程中 24 小时血糖状况,进行饮食控制 3-5 天后连续三天测定 7 次末梢血糖,分别为三餐前、三餐后及睡前。经控制饮食和加强运动后,如血糖控制至理想水平,即空腹及三餐前 3.3-5.3 mmol/L,三餐后小 2 小时 4.4-6.7 mmol/L,且尿酮体呈阴性,则继续这种管理治疗;若治疗效果不佳,则收治入院进行饮食控制及胰岛素(主要使用

超短效胰岛素"诺和锐-R"及中效胰岛素"诺和灵-N")治疗,并随着孕周的增长,逐渐增加胰岛素用量^[9,10]。治疗期间仍然监测血糖,根据血糖调节胰岛素用量。每 2-3 个月测定 1 次 HbA1c。产妇分娩过程中严密监测产程进展及产妇血糖水平,详细记录妊娠结局及妊娠并发症发生情况^[11]。

1.3 统计学方法

采用 SPSS13.0 统计学软件对数据进行分析,用 χ^2 检验,以 $P<0.05$ 为差异有统计学意义。

2 结果

2.1 两组患者妊娠并发症情况比较

对观察组 and 对照组患者妊娠并发症包括妊娠期高血压病、产后感染、羊水过多等进行分析比较,发现患者发生产后感染、酮症酸中毒、羊水过多的数据有统计学意义,妊娠期高血压疾病及早产的数据无统计学意义,考虑妊娠期高血压疾病病因至今不明,早产的发生机制^[12]主要为:①孕酮撤退;②缩宫素作用;③蜕膜活化;观察组孕产妇出现妊娠期并发症明显比对照组孕产妇少,具有统计学意义。2 例出现酮症酸中毒的产妇,一例经正规胰岛素灭酮治疗后好转,一例转上一级医院内分泌科治疗,在 ICU 观察 3 天后方转危为安。见表 1。

表 1 观察组与对照组妊娠并发症的比较

Table 1 Comparison of pregnancy complications between observation group and control group

Group	Gestational hypertension	Postpartum infection	Ketoacidosis	Hydramnios	Preterm birth	Total
Observation Group (n=138)	10 (7.2%)	8 (5.8%)	0 (0.0%)	17 (12.3%)	16 (11.6%)	51 (37.0%)
Control group (n=62)	9 (14.5%)	9 (14.5%)	2 (3.2%)	18 (29.0%)	12 (19.4%)	50 (80.6%)
Total	19 (9.5%)	17 (8.5%)	2 (1.0%)	35 (17.5%)	28 (14.0%)	101 (50.5%)
χ^2	2.63	4.182	4.497	8.277	2.14	32.66
P	0.1049	0.0409	0.034	0.004	0.1435	<0.0001

2.2 两组患者新生儿并发症情况比较

对观察组和对照组患者出现新生儿并发症的情况进行分析比较,发现巨大儿及死胎的数据有统计学意义($P<0.05$),而低出生体重儿、畸形及呼吸窘迫综合征的数据无统计学意义,原因可能为新生儿中低出生体重儿、畸形等不排除与遗传基因有关,而呼吸窘迫综合征则与多因素有关;同样,观察组孕产妇

出现新生儿并发症明显比对照组孕产妇少,具有统计学意义($P<0.05$)。产妇新生儿畸形 2 例为心血管畸形和神经系统畸形,2 例为外耳廓畸形(尚未查阅到高血糖对外耳发育有何影响的相关报道)。对照组中有一例巨大儿体重为 4.6 Kg,经剖宫产娩出后合并呼吸窘迫综合征,18 小时后经抢救无效死亡。见表 2。

表 2 观察组与对照组新生儿并发症的比较

Table 2 Comparison of neonatal complications between observation group and control group

Group	Macrosomia	Low birth weight	Dead fetus	Deformity	Respiratory distress syndrome	Total
Observation Group (n=138)	6 (4.3%)	5 (3.6%)	0 (0.0%)	2 (1.4%)	8 (5.8%)	21 (15.2%)
Control group (n=62)	8 (12.9%)	4 (6.5%)	2 (3.2%)	2 (3.2%)	7 (11.3%)	23 (37.1%)
Total	14 (7.0%)	9 (4.5%)	2 (1.0%)	4 (2.0%)	15 (7.5%)	44 (22.0%)
χ^2	4.81	0.7964	4.497	0.6889	1.89	11.93
P	0.0283	0.3722	0.034	0.4066	0.1725	0.0006

3 讨论

妊娠期糖尿病是在一定的遗传因素和环境因素的影响下,在妊娠这一特殊的生理时期发生的以糖代谢异常为主要表现的综合征,其病因和发病机制是非常复杂的,至今尚不清楚^[13]。正常妊娠状态下,孕妇机体主要通过胎盘的内分泌作用调节血糖,维持孕妇血糖水平,保证胎儿正常发育。胎盘合成与分泌了一系列与糖代谢密切相关的激素,其中胎盘生乳素等具有拮抗胰岛素的作用,胎盘胰岛素酶还可加速胰岛素降解,共同调节机体血糖水平^[14]。同时,妊娠期间孕妇血液中三酰甘油和游离脂肪酸增加,可抑制胰岛素分泌。如果上述各机制正常,相互作用的结果就是维持血糖和糖耐量处于正常水平,而上述机制任何一个环节出现异常,都可能导致糖尿病的发生^[15]。

高血糖对孕产妇及新生儿都可产生严重影响,可造成孕妇:①糖、脂肪、蛋白质代谢紊乱,血清酮体急剧升高,出现酮症酸中毒;②高血糖、高血脂导致妊高症;③早产和宫内感染^[16,17]。对胎儿的主要影响为:①刺激胰岛素分泌,促进糖原、蛋白质等合成,易出现巨大儿;②抑制胚胎发育,出现畸形;③降低血氧供应,导致胎儿宫内严重缺氧死亡;④延迟胎儿肺成熟,易出现新生儿呼吸窘迫综合征^[18]。因此,控制血糖升高,调节 GDM 患者血糖水平,对孕产妇及新生儿的健康至关重要。

目前,临床上治疗 GDM 主要采用单纯控制饮食和加强运动以及在此基础上配合胰岛素治疗等治疗方法^[19]。控制饮食的原则是既要保证孕产妇和胎儿的营养,又要不产生饥饿性酮体以及餐后高血糖。适量合理的体育运动可有效提高胰岛素的敏感性,促进糖代谢,但要以不压迫胎儿、不引起宫缩等为原则。但是,GDM 患者若出现运动量过大、错过或延迟进餐和加餐时间、食物摄入量过少以及胰岛素用量过多或使用时间不对、肝肾功能不全等可出现低血糖,可导致饥饿感、乏力、颤抖或震颤、出汗、易激动、感觉错乱,甚至失去知觉、意识模糊、产生幻觉甚至危及母亲及胎儿生命^[20],所以需要对 GDM 患者采取科学合理的管理和治疗。

我们对 200 例 GDM 患者妊娠期并发症和新生儿并发症情况进行分析比较,发现经过糖尿病管理和治疗的观察组孕产妇在妊娠期并发症和新生儿并发症发生率上都要显著低于没有经过管理和治疗的对照组患者,结果具有统计学意义($P < 0.05$)。观察组和对照组在妊娠期高血压疾病及早产上的数据无统计学意义,可能的原因是:(1)妊娠期高血压疾病病因尚不明;(2)早产的原因为:①孕酮撤退;②缩宫素作用;③蜕膜活化。两组在低出生体重儿、畸形及呼吸窘迫综合征上的数据无统计学意义,原因可能为低出生体重儿、畸形等可能与遗传基因有关,而呼吸窘迫综合征则与多因素有关。

研究显示科学合理的糖尿病管理和治疗对减少 GDM 患者妊娠期并发症和新生儿并发症具有显著作用,可更好地保证母婴安全,减少医疗风险,保证孕妇和胎儿的健康,值得临床推广。

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