

孕期应激对母儿影响的研究新进展

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【摘要】 孕期的精神社会应激会显著增高患者的 CRH 和皮质醇水平,造成不良妊娠结局,如早产、低体重儿、妊娠期高血压疾病。而且孕期应激与产后抑郁发生关系密切,对后代的心理、行为、中枢系统发育都有不利影响。

【关键词】 孕期应激; 产后抑郁症; 创伤后应激障碍; 皮质醇

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New Development of Effect of Pregnancy Stress of Mother and Fetal

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【Abstract】 Pregnancy stress may significantly elevate the level of CRH and cortisol, which contributes to the bad pregnancy outcomes like premature delivery, low birth weight infant even hypertensive disorders complicating pregnancy. It also has close relationship with postpartum depression. In addition, it has a bad influence on offsprings' mental growth, behavior development and the development of central nervous system.

【Key words】 Pregnancy stress; Postpartum depression; Post-traumatic stress disorder; Cortisol

应激是在特定的年龄阶段和特定社会情景中,实际地威胁到个体身心健康的环境事件或长期状况^[1]。应激会引起促肾上腺皮质激素释放激素(CRH)合成和释放增加,激活下丘脑-垂体-肾上腺轴(HPA),升高皮质醇水平^[2]。妊娠可看作是精神紧张的特殊状态,妊娠相关事件如意外怀孕,流产,严重恶心、呕吐等带来的不适,对胎儿性别及健康的担心,对父母角色的迷茫,对临近的分娩的恐惧,及孕期有关社会、财政、职业、人际关系等方面的担心都可能成为孕期应激源,增加应激水平。流行病学研究显示孕期的精神社会应激,是早产、低体重儿等不良妊娠结局的危险因子,与产后抑郁发生密切相关,而且会影响后代发育。本文查阅近十年国内外文献,从孕期应激对母儿影响的三个方面予以综述。

1 孕期应激对妊娠结局的影响

1.1 孕期应激与早产、低体重儿的关系

流行病学证据表明,孕期的精神社会应激、紧张的生理活动等是早产低体重儿等不良妊娠结局的独立危险因素^[3]。不少学者的研究也证实了这点,Coussons 认为孕前应激会改变母亲生理免疫功能,与早产等不良妊娠结局高度相关^[4]。Altarc 等^[5]研究证实,孕期遭受辱骂或身体虐待与低体重儿的出生明显相关。在不利社会心理环境中工作的孕妇,其早产率和低体重率明显增高^[6]。孕期的非裔美国妇女比白人妇女表现出更高的应激状态和血压,是低体重儿出生的高风险因子^[7]。Glynn 等^[7,8]研究发现孕期压力感(perceived stress)、焦虑类型与孕周长短明显相关,与足月产组相比,早产组妇女焦虑和应激水平明显上升。

1.2 孕期应激与妊娠期高血压疾病

有学者在控制了年龄、产次、种族、教育水平后,对 725

例病人进行产科和心理的自我管理问卷,得出孕期情绪应激是妊娠期高血压发生的高风险因素,心理干预会降低孕期不良情绪,从而降低妊娠期高血压的发生率^[9]。有学者发现孕前应激增加炎症因子和细胞因子的释放,可能增加妊娠并发症的发生风险^[4]。皮质醇是应激的重要指标,研究中常用唾液和血液中皮质醇反映体内皮质醇水平。Nierop^[10]研究发现唾液皮质醇在孕中期恢复期延长,指出这种情况易感妊娠并发症。Bjelica 指出患有妊娠期高血压疾病的患者更多去寻求社会支持,对应激的反应更明显^[11]。最近研究发现孕期应激测试能预测孕妇后半生的健康状态^[12]。

2 孕期应激与产后抑郁症的关系

焦虑和抑郁是应激最常见的心理反应。最近研究表明孕期精神生物学应激与产后抑郁症状密切相关。产后抑郁症(PPD)多在产后两周内发病,主要表现为悲观抑郁,沮丧哭泣,易激动,烦躁等一系列症状为特征的精神紊乱。Nierop^[13]等对 57 名 21-35 岁的健康初产妇在孕期进行标准心理社会应激测评,并在产后 13 天用爱丁堡抑郁量表(EPDS)进行产后抑郁评分。结果显示可能的 PPD 组有明显高的皮质醇反应,而且有较高的状态性焦虑、低情绪状态、有较高的应激易感性、较高的特征性焦虑、较高的 SCL-90 得分,因此他们认为可以通过孕期的高皮质醇反应性和对精神应激高的心理反应性,来预测产后两周内的抑郁症状。但是否预测典型产后抑郁症还需要进一步研究。Grote^[14]等的研究表明,孕期母亲受到家庭财务、配偶态度、身体状况和职业相关的应激,与产后抑郁发生相关,而乐观情绪能明显缓解这些应激带来的影响,降低产后抑郁发生的危险。Urizar^[15]对 41 名低收入孕妇进行应激和情绪测试(抑郁症状和正性负性情绪),同时收集

了他们的早晚唾液以测皮质醇水平。在实行了减压技术(stress reduction, SR)后显示应激水平、抑郁症状及负性情绪明显降低,清晨皮质醇水平也明显下降。Vieten^[16]系统研究了在心理干预前,干预后即刻,干预后3月母亲的焦虑状态,与未干预组比较,干预组母亲负性情绪有明显的下降。由此可见心理干预能明显减轻母亲的不良心理状态。

3 孕期应激与后代发育的影响

3.1 产前应激与后代皮质醇水平及免疫功能的关系

临床研究发现,母亲产前应激对后代皮质醇水平和免疫功能有影响。孕期应激时母亲高水平的皮质醇,可通过胎盘传递给胎儿,导致新生儿脐血中皮质醇含量升高,使胎儿处于应激状态^[17]。孕期应激对后代免疫功能也有重要影响,动物研究发现孕期应激组的后代,在心理社会因素应答时免疫水平较低。Gotz^[18]发现,应激鼠后代的淋巴细胞数和粒细胞数均明显低于非应激鼠后代,血浆皮质醇水平也明显下降。经受产前慢性应激的母鼠后代出生时体重并无显著差异,但断奶后体重增长明显慢于对照组^[19]。这些说明母孕期应激会导致后代皮质醇水平升高和免疫功能下降。

3.2 产前应激与新生儿心理行为发育的关系

Egliston^[20]动物模型显示,发育敏感期母孕期的应激和焦虑可能通过胎儿HPA轴,导致神经发育和行为的持久变化,提出人类也可能是通过胎儿HPA轴引起胎儿早期发育不良。目前使用特异性婴儿气质和行为量表,可以得到母亲产前应激对后代行为心理学的关系。Austin等^[21]评估970例母孕期焦虑、生活事件、产后抑郁和婴儿气质的关系时发现,产前特异性焦虑(STAI)能有效预测婴儿的“困难”气质,产前抑郁和生活事件评分则不能预测婴儿气质。Mohler^[22]的研究表明,母亲孕前情绪应激与婴儿新奇和厌恶等情感反映相关。孕期抑郁症状、妊娠相关焦虑、妊娠压力、孕期工作压力都单方面或多方面的与婴儿过度哭闹有关^[23]。有证据表明母亲应激与后代行动紊乱有关。研究母孕期生活方式(压力和/或吸烟)与七岁儿童多动症(ADHD)关系时,发现产前压力和吸烟与儿童(特别是男孩)多动症独立相关^[24]。Grizenko^[25]研究证明母亲孕期应激与后代注意力缺陷、ADHD明显相关,且ADHD严重程度与母孕期应激水平呈正相关。Rieger^[26]利用新生儿行为评估量表(NBAS)评估产前应激对81名新生儿行为特性的影响,结果显示产前高应激母亲其新生儿NBAS得分较低。还有研究指出母孕期应激也可以预测婴儿认知能力和行为退缩,且对认知和行为退缩的影响机制不同^[27]。

3.3 产前应激对后代中枢系统发育的关系

孕期应激对后代中枢系统发育的研究多是通过动物实验完成的,Schneider^[28]实验证实孕期应激会引起子代海马结构异常,导致记忆和空间辨别能力下降。Ryzhavskii^[29]等对母鼠实行3周的情感动激后与正常雄鼠交配,十天后再接受应激,观察后代脑发现实验组后代脑重更低,小脑形态更小,蒲肯野细胞的胞浆和胞质都更少。Murmu^[30]的动物实验表明,孕期应激的母鼠会引起后代的额前神经结构明显变化。Hirst^[31]指出孕期应激激活胎儿神经嵴体-别孕烯醇酮,能保护胎儿脑细胞免受缺氧损害,而出生后别孕烯醇酮水平下降则易引

起新生儿脑损害。目前孕期应激对后代中枢发育的影响机制尚不清楚。

4 孕期创伤后应激障碍

创伤后应激障碍(PTSD)是与应激直接相关的精神障碍,它可以引起人体心理生理功能紊乱,内稳态失调及适应性功能障碍。创伤后应激障碍作为一种严重的应激反应,不少研究表明会引起免疫功能障碍,焦虑抑郁程度明显升高,孕期的重大精神创伤也会对母儿有不良影响。有学者通过调查2290名诊断为PTSD的育龄期妇女,发现存在孕期并发症和创伤后应激障碍的女性发生宫外孕、自然流产、妊娠剧吐、早产、胎儿宫内发育迟缓等疾病的几率更高^[32]。Yehuda^[33]研究发现,孕期经历PTSD的母亲其后代都有较低的唾液皮质醇水平,而孕晚期经历PTSD的母亲其唾液皮质醇水平更低。Laplante^[34]把1998年暴风雪灾害作为孕期应激源,考察其对后代智力及语言能力的影响,结果显示产前应激特别是母孕早期压力高的患者,胎儿脑发育不良,幼儿时表现出较低的平均智力水平和语言能力。最近的研究也发现,PTSD和早产、低体重儿及产后抑郁的发生相关^[35]。

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