

鹦鹉热的相关研究进展

谭国权

(佛山市第一人民医院禅城医院检验科 广东 佛山 528000)

【摘要】近年来全球鹦鹉热确诊病例不断上升,该病一般与感染鹦鹉热的鸟类或家禽接触有关,也有人际传播的可能。妊娠期感染鹦鹉热的孕妇难以被发现,如不及时诊断和治疗可能导致孕妇、胎儿死亡的不良妊娠结局。本文就妊娠期鹦鹉热衣原体感染的传染源、实验室诊断、抗生素治疗、不良结局和预防措施等进行综述。

【关键词】综述; 鹦鹉热; 人际传播; 传染源; 不良妊娠

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Research on psittacosis

TAN Guoquan

Laboratory Department of Chancheng Hospital, Foshan First People's Hospital, Foshan, Guangdong 528000, China

【Abstract】In recent years, the number of confirmed cases of psittacosis has been increasing worldwide, and the disease is generally related to contact with birds or poultry infected with psittacosis, and there is also a possibility of human to human transmission. Pregnant women infected with psittacosis are difficult to detect, and failure to receive timely treatment may lead to adverse pregnancy outcomes such as maternal and fetal death. This article reviews the sources of infection, laboratory diagnosis, antibiotic treatment, adverse outcomes, and preventive measures of Chlamydia psittaci infection during pregnancy.

【Key words】Review; Psittacosis; Interpersonal communication; Sources of infection; Adverse pregnancy

鹦鹉热是一种人畜共患病,人类妊娠期感染,其临床表现缺乏特异性,与其他常见的呼吸道感染相似,容易造成临床医生漏诊、误诊^[1]。若不能明确病原体 and 及时治疗,可能导致不良妊娠结局。本文基于目前妊娠期感染鹦鹉热衣原体导致不良结局现状,针对传染源、实验室诊断、治疗、预防措施等进行综述,以期今后开展相关研究提供科学依据。

1 传染源

鹦鹉热衣原体属于衣原体属,是介于病毒和立克次体之间的一种革兰阴性病原体。根据鹦鹉热衣原体外膜蛋白基因(ompA)测序,可分为A-G、WC、E/B、M56等共10个基因型,所有基因型均可感染人类。每一种基因型都有其特定倾向的动物类型,鸟类或家禽的感染以基因型A-G和E/B为主,WC和M56分别在牛和麝鼠中被发现。据报道,鹦鹉热衣原体可感染400多种鸟类^[2]。1879年, Jacob Ritter发现鹦鹉热与鹦鹉和雀有关。人类感染鹦鹉热主要由接触鸟类或家禽的尿液、羽毛、粪便引起的。另外也有报道指出一些受感染的哺乳动物可以向人类传播鹦鹉热,是潜在的传染源^[3]。过去认为人际传播是罕见的^[4],而最新的研究发现鹦鹉热衣原体存在多种人际传播途径^[5],不仅存在于感染者与密切接触者之间,还发生密切与次密切接触者之间的人际传播,无症状携带者也可传播病原体。

2 实验室诊断

鹦鹉热的实验室诊断主要包括病原学培养、血清学检测和核酸扩增技术。传统的病原学培养是鹦鹉热衣原体诊断的金标准,但因鹦鹉热衣原体为生物恐怖主义病

原体^[6],需要在三级实验室进行。培养法操作复杂、检出率低,所以很少有医院开展。血清学标本容易获得、操作相对于培养法简单,但需采双份血清且达不到早期诊断的作用^[7]。若患者采血前已经过抗生素的治疗抑制了抗体的产生,可能会出现假阴性的结果。鹦鹉热衣原体的核酸扩增技术有着高敏感度、高特异度的特点,还能对衣原体进行分型。在2018年8—10月,美国弗吉尼亚州和佐治亚州的家禽屠宰厂工人发生了严重呼吸系统疾病的暴发。美国CDC使用实时PCR检测54例标本,这是美国有史以来应用实时PCR检测鹦鹉热暴发标本数量最多的一次^[8-9]。

随着测序技术的发展,过去十年越来越多鹦鹉热感染的病例被发现,它能对病原体无定向、高通量、无偏倚进行检测^[10-11]。2020年,新型冠状病毒世界大流行期间中国一医院的隔离病房多名医护人员出现不明原因的肺炎,而新冠肺炎病毒、常见的呼吸道病原体检测均为阴性,最后经mNGS检测出鹦鹉热衣原体^[12]。但mNGS价格昂贵、尚无统一的结果判读标准,多在常见病原体检测阴性的危重患者身上运用。

3 治疗

鹦鹉热衣原体属于胞内寄生的微生物,没有典型的细胞壁,对β-内酰胺的药物不敏感,应选择干扰其DNA和蛋白质合成的抗生素来治疗^[13]。但因其专性胞内生长的特性,体外药敏试验需活细胞培养,所以实际工作中很少进行药敏试验,也缺乏药物敏感试验标准。中国成人社区获得性肺炎诊断和治疗指南中指出,鹦鹉热衣原体感染治疗的首选抗生素是多西环素,需至少连

用10 d^[14]。鹦鹉热衣原体对多西环素敏感,大多数发烧的患者可以在服药后48 h内退烧。因孕妇对四环素类抗生素存在用药禁忌,所以大环内酯类(阿奇霉素、红霉素)抗生素是治疗鹦鹉热妊娠期感染最好的选择^[15-16]。若孕产妇分娩后要持续服用四环素类抗生素应暂停母乳喂养。喹诺酮类抗生素也可以用于治疗鹦鹉热,但活性不如四环素和大环内酯类抗生素,常与多西环素联合使用。

4 不良妊娠及生育结局

鹦鹉热衣原体侵入上呼吸道后,在上皮细胞和局部单核巨噬细胞中繁殖,并通过血液传播到肺和其他脏器,同时也会影响到网状内皮系统^[17]。人类感染鹦鹉热衣原体症状包括发热、头痛、肌肉酸痛、干咳。在极少情况下会出现心肌炎、心内膜炎、脑炎。而妊娠期感染鹦鹉热,可能出现非典型肺炎、肝炎、肾功能不全、孕妇或胎儿死亡^[18]。1997年,美国蒙大拿州报道一名牧羊人妊娠期感染鹦鹉热出现高烧和呼吸窘迫,入院紧急终止妊娠和抗生素治疗后病情得到好转^[19]。2006年,Janssen等^[20]报道了一名农民的妻子在怀孕31周时出现脓毒性休克,提前分娩后婴儿发育良好,但妻子由于多器官衰竭而死亡,随后被证实感染鹦鹉热。一项回顾性研究表明妊娠鹦鹉热罕见,它对胎儿及孕妇危害巨大,导致胎儿病死率和孕妇病死率分别为82.6%和8.7%^[21]。2018年,Paul等^[22]利用mNGS技术对一例死亡胎儿的胎盘组织进行测序发现了大量的鹦鹉热衣原体序列。鹦鹉热衣原体可以穿过血胎屏障,在胎盘内大量繁殖和随后的子宫胎盘灌注损伤引起宫内胎儿窘迫,是造成胎儿死亡的原因。若及时剥离胎盘缩短病程能改善母婴结局。

5 预防措施

目前世界上尚无疫苗预防人类鹦鹉热衣原体感染,对于鹦鹉热的主要预防措施是通过孕妇进行健康教育,提高人们对鹦鹉热衣原体的认识。鹦鹉热衣原体广泛存在于鸟类和哺乳动物中^[3],所以孕妇应尽量避免与鸟类、山羊、马接触,日常生活中处理完活禽后应认真洗手。人们在日常生活中应对宠物定期进行驱虫、不喂生肉等。加强对禽类养殖业鹦鹉热的防控,以免造成疫情的暴发^[23]。在欧美很多国家,鹦鹉热属于法定传染病^[24],必须按时上报疾控中心。而在我国鹦鹉热不在法定传染病监管的目录里。

6 结语

妊娠期感染鹦鹉热的症状与常见的呼吸道感染相似,临床医生往往忽视,错过最佳的治疗时间。孕妇和产科医生会意识到避免在妊娠期接触猫、狗,但可能忽略一些家禽、家畜也是人畜共患病的重要传染源。当医生遇到妊娠期呼吸道感染孕妇经验性治疗失败后,应询问患

者的职业和动物接触史。近年来鹦鹉热的报告病例逐年增加,其对妊娠和生育的影响可能演变成公共卫生问题。鹦鹉热衣原体的感染可能导致不良妊娠及生育结局,应当重视妊娠鹦鹉热的早期诊断,建议将其作为呼吸道常规筛查的病原体。对于鹦鹉热衣原体感染,预防机制尚不成熟,需要探索新的预防方法或疫苗的开发。

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