

非神经科住院患者颅内静脉窦血栓形成临床和影像特征分析并文献复习

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摘要 目的:探讨非神经科住院患者颅内静脉窦血栓形成(CVST)发生的病因、临床和影像学特征,提高临床医生对CVST的识别和诊断能力。**方法:**回顾性分析因非神经科疾病于其他科室接受住院治疗,并于住院期间确诊的CVST患者的临床和影像学资料,同时结合相关文献进行回顾性分析。**结果:**共纳入6例确诊的CVST患者,其原发性疾病分别为肾小球肾炎(2例)、白血病(1例)、产后(1例)、抗磷脂抗体综合征(1例)、多发伤(1例)。临床表现以头痛最为常见(4例),5例接受D-二聚体检测的患者中有4例升高。MRV提示4例为多发性血栓形成,部位以横窦(5例)最易受累,其次为上矢状窦(3例)和乙状窦(3例)。除1例患者出院时遗留一定的残疾外,其他5例患者均预后良好。检索既往相关个案报道,横窦为妊娠相关CVST最易累及的部位,难治性颅内压升高往往是外伤性CVST患者较为特征性的临床表现,抗磷脂抗体综合征相关CVST患者易表现为广泛的脑静脉窦血栓及皮质静脉血栓形成,门冬酰胺酶药物治疗是急性白血病患者发生CVST的重要因素。**结论:**CVST病因复杂,临床表现多样,头痛是其最常见的临床表现,其临床表现和原发性疾病可存在一定程度的重叠,非神经科医生应提高对CVST的识别能力并及时予以治疗。

关键词 颅内静脉窦血栓形成;非神经科;诊断;住院

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Analysis of Clinical and Imaging Features of Cerebral Venous Sinus Thrombosis in Non-Neurological Hospitalized Patients and Literature Review QIN Li¹, CAI Li-na², SUN Zhi-qian¹, LI Ji-lai². 1. Department of Rehabilitation, Beijing Sijiqing hospital, Beijing 100097, China; 2. Department of Neurology, Aerospace Center Hospital, Beijing 100049, China

Abstract Objective: To investigate the etiology and clinical and imaging features of cerebral venous sinus thrombosis (CVST) in non-neurological hospitalized patients, so as to improve the ability of clinicians to identify and diagnose CVST. **Methods:** The clinical and imaging data of patients with CVST who were hospitalized due to non-neurological diseases were retrospectively analyzed along with relevant literature. **Results:** A total of 6 patients with CVST were included. The primary diseases were glomerulonephritis (2 cases), leukemia (1 case), postpartum (1 case), antiphospholipid antibody syndrome (1 case), and multiple injuries (1 case). Headache (4 cases) was the most common clinical manifestation. Of the 5 patients who received the D-dimer test, 4 showed increased D-dimer levels. Magnetic resonance venography (MRV) showed that 4 cases were multiple thrombosis, and that the transverse sinus (5 cases) was most frequently involved, followed by the superior sagittal sinus (3 cases) and sigmoid sinus (3 cases). Apart from 1 patient who was left with a certain disability at the time of discharge, the other 5 patients showed good prognosis. According to previous related case reports, the transverse sinus is the most commonly affected site of pregnancy-related CVST, and refractory intracranial hypertension is often a characteristic clinical manifestation of traumatic CVST patients. CVST patients with antiphospholipid antibody syndrome are prone to extensive cerebral venous sinus thrombosis and cortical venous thrombosis. Asparaginase drug therapy is an important factor in the occurrence of CVST in patients with acute leukemia. **Conclusion:** The etiology of CVST is complex and its clinical manifestations are diverse. Headache is the most common clinical manifestation. There may be some overlap between the clinical manifestations of CVST and the primary disease. Improving the ability of non-neurologists to recognize CVST is of great significance for a timely diagnosis.

Key words cerebral venous sinus thrombosis; non-neurological; diagnosis; in-hospital

颅内静脉窦和脑静脉共同构成了脑的静脉系统血管,其发生的静脉血栓称为颅内静脉窦血栓形成(cerebral venous sinus thrombosis, CVST)。CVST是特殊类型的卒中,主要有

发生率低、常见于青年患者、更常见于青年女性患者、起病形式多样(通常为非卒中样发作)等特点^[1]。因CVST临床表现多样,危险因素(如感染、妊娠/产褥期^[2]、口服避孕药等)

和病因(蛋白C、蛋白S缺乏^[3]、肿瘤、白塞氏病^[4]、肾病综合征^[5]等)多样,其早期极易误诊、漏诊,延误治疗。特别是在合并CVST危险因素的非神经科住院患者中,其识别和早期诊断更为困难。本研究旨在对两家医院近5年非神经科住院患者发生的6例CVST患者的临床和影像学特征进行分析,并进行相关的文献复习,以提高非神经科临床医生对该病的认识和管理能力。

1 资料与方法

1.1 一般资料

回顾性分析2015年01月至2020年08月于北京四季青医院和航天中心医院因非神经科疾病于其他科室接受住院治疗,并于住院期间确诊的CVST病例。

1.2 方法

1.2.1 资料收集及分析 详细收集患者相关临床、实验室和影像资料,包括一般人口学资料、症状、体征、入院诊断、基础疾病、病因和诱发因素等临床信息,血常规、凝血指标等实验室资料、头颅CT、CT静脉成像(computed tomography venography, CTV)、MRI、磁共振静脉成像(magnetic resonance venography, MRV)及数字减影血管造影(digital subtraction angiogram, DSA)等影像学资料, CVST确诊时间以及治疗方案和预后等。患者CVST形成的诊断符合《中国颅内静脉系统血栓形成诊断和治疗指南2015》的诊断标准^[6]。

1.2.2 文献复习 检索Pubmed数据库,输入相关关键词“pregnancy、glomerulonephritis、antiphospholipid antibody syndrome、posttraumatic cerebral venous sinus thrombosis、leukemia、cerebral venous sinus thrombosis”,收集上述疾病相关CVST病例报道。对符合条件的所有病例相关临床及影像学的表现和特征进行统计总结,汇总报道。

2 结果

2.1 临床资料

共纳入符合条件的CVST的患者6例,其中男3例,女性3例;年龄32~65岁;其中因肾病综合征、肾小球肾炎在肾内科住院2例,因妊娠生产在妇科住院1例,因白血病在血液科住院1例,因抗磷脂抗体综合征在风湿免疫科住院1例,因多发伤在外科ICU住院1例;患者的神经系统的症状为头痛4例,肢体抽搐1例,视物不清1例。确诊时间分别为1、2、3、5、5和150 d;6例患者均接受了标准的抗凝治疗方案,无静脉溶栓或血

管内取栓和(或)支架治疗;出院时改良Rankin量表(modified Rankin Scale, mRS)评分为3分为1例(预后不良),0分为5例(预后良好)。

2.2 实验室资料

6例患者均无明确感染表现,其中D-二聚体高于正常值(735~9750 μg/L)4例,正常1例(为抗磷脂抗体综合征患者),未测1例。仅1例抗磷脂抗体综合征患者接受了腰椎穿刺检查,脑脊液压力420 mmH₂O。

2.3 影像资料

6例均经MRV检查确诊CVST。表现为多发血栓形成4例,单发血栓形成2例,血栓累及横窦5例,累及上矢状窦3例,累及乙状窦3例,累及直窦2例。接受头颅CT检查2例,均发现蛛网膜下腔出血;接受头MRI检查4例,表现为右侧颞枕部静脉性脑梗死影像学表现1例,未见明显异常2例,表现为右侧额顶部静脉性脑梗死1例。

2.4 文献复习

通过检索“pregnancy 和 cerebral venous sinus thrombosis”共获得妊娠相关CVST个案报道18例,其中法语、葡萄牙语各1篇,西班牙语、日语各2篇,英语12篇。CVST主要发生在孕8周至孕34周,在生产过程中出现癫痫大发作而确诊1例;其中70%以上的患者以头痛(伴或不伴恶心,呕吐)为首发临床症状,30%的患者以偏瘫,言语障碍,复视等局灶性神经功能缺损的症状起病,2例以癫痫起病,2例以意识障碍起病。横窦为妊娠相关CVST最易累及的部位(>80%),其次为上矢状窦(50%)。患者死亡1例,其余均预后良好。通过检索词“posttraumatic cerebral venous sinus thrombosis”共获得外伤相关CVST个案报道7例。双侧髌骨骨折1例;其余6例均存在头外伤病史;3例为外伤术后行硬膜下颅内压监测发现难治性颅高压,进一步行头MRV或CTV检查而确诊;2例初诊头CT直接确诊;1例为住院期间意识水平改变而确诊;1例为出院后2周发生复视表现而检查确诊。受累部位最常见为乙状窦和颈内静脉,共3例。接受去骨瓣减压术3例,其中因难治性颅内压升高,接受了扩大的去骨瓣减压术2例。患者死亡1例,存活6例。检索“antiphospholipid antibody syndrome、leukemia、glomerulonephritis”和“cerebral venous sinus thrombosis”,获取抗磷脂抗体综合征相关CVST 2例(表现为广泛的脑静脉窦血栓及皮质静脉血栓形成1例,表现为视乳头水肿后10个月确诊CVST1例),肾小球肾炎相关CVST 2例(1例为抗肾小球基底膜抗体及

抗中性粒细胞胞质抗体双阳性新月体肾炎,以偏瘫起病;1例为特发性膜性肾病患者,以头痛、癫痫起病),白血病相关CVST 3例(2例为急性淋巴细胞性白血病,1例为急性髓系白血病;其中1例因接受门冬酰胺酶药物治疗发生CVST,1例接受了嵌合抗原受体T-细胞治疗发生CVST;3例均有头痛;2例累及横窦,1例累及上矢状窦)。

3 讨论

CVST临床表现缺乏特异性^[7],尤其是因原发性疾病在非神经科接受住院治疗的患者发生的CVST更容易漏诊或误诊。肾脏科、风湿免疫科、血液科、妇产科及外科ICU等科室住院诊疗的患者和CVST的发生更为密切,这与CVST的特点密切相关^[1,8]。本研究6例CVST患者中3例在出现神经系统症状的3 d内确诊CVST,其他3例确诊时间均在5 d以上,最长的1例是发病后5个月确诊。其原因一方面和非神经科医生缺乏对该病的认识有关,另一方面也和患者原发疾病的临床表现复杂、且与CVST的临床表现存在一定程度的重叠有关。提高上述科室医生及神经内科医生对CVST的认识具有重要的临床意义。

CVST的病因和危险因素复杂多样,目前已有的报道有:妊娠、雌激素替代治疗、白血病、系统性红斑狼疮^[9]、抗磷脂抗体综合征^[10]、脑外伤^[11]。本研究即有2例是常见肾小球肾炎疾病,1例为临床较罕见的抗磷脂抗体综合征,1例为白血病,1例为产后,1例为多发伤。

CVST的临床表现多样,以头痛最为常见,可见于70%~90%的患者^[1]。本研究中6例CVST患者中有4例以头痛作为首发或主要症状。痫性发作可见于30%~40%的患者,本研究中有1例患者出现癫痫发作。视乳头水肿见于30%~60%的患者,本研究中有1例以视物不清,视乳头水肿作为首发症状。局灶性运动功能缺损可见于30%~50%的患者,本研究中有1例出现运动功能缺损的表现。昏迷可见于5%~15%的患者,本研究无病例出现昏迷。本研究中诊断时间较长的抗磷脂抗体综合征的患者,其CVST的表现为单纯的视物模糊,与原发性疾病的眼球玻璃体浑浊导致的视物模糊存在一定的重叠,导致的CVST诊断的延迟,在非神经系统疾患的患者中CVST识别的难度较高。本研究中多发伤的患者,早期CT影像表现为蛛网膜下腔出血,因患者同时存在CT低密度表现进一步行头MRV检查明确了CVST的存在。提示当患者出现头痛症状或外伤性蛛网膜下腔出血时不要忽

略对CVST的识别和必要的筛查。除临床表现外,血浆D-二聚体升高,可能是CVST的识别和诊断的潜在指标^[12,13]。本研究中接受血浆D-二聚体检测的5例患者中的4例存在不同程度的升高。抗磷脂抗体综合征患者的D-二聚体未见明显升高,不排除和CVST诊断延迟,血栓部分再通,患者为静脉窦血栓降解期有关。临床上除全脑血管造影外,对于疑诊CVST患者常采用头颅CT静脉成像或头颅MR静脉成像以协助明确诊断^[14]。研究也显示MR黑血血栓成像技术正逐步成为CVST诊断的一线成像方法^[15]。

抗凝治疗是目前CVST的主要治疗手段^[16]。并未证实血管内治疗较标准抗凝治疗可以更好的改善CVT患者的功能预后,因此目前不推荐血管内治疗作为CVST的常规治疗手段。大型国际研究^[17]提示绝大多数CVST患者长期预后良好,<4%的患者在CVST急性期出现死亡事件。

综上所述,CVST病因复杂,临床表现多样,常见于青年患者。头痛是其最常见的临床表现,其临床表现和患者原发性疾病可存在一定程度的重叠。非神经科医生,尤其是肾内科、风湿免疫科、妇产科及外科ICU医生提高对该病的认识,具有重要的临床意义。

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