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个案与短篇

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腹部增强CT图像显示腹腔从属性静脉对比剂淤积征1例

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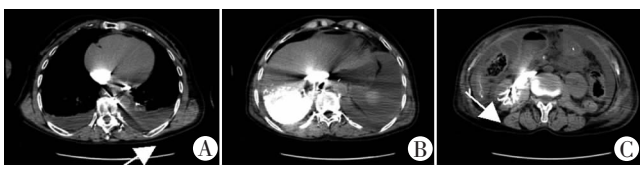
[**关键词**] 腹腔从属性静脉;对比剂淤积征;腹部增强CT
[**中图法分类号**] R604 [**文献标志码**] B

危重患者接受增强CT检查有利于明确诊断,然而正在接受CT检查的患者可能发生心脏骤停、急性心功能不全以及心源性休克,该类患者的增强CT影像有其显著特点,即"从属性静脉对比剂淤积征"(dependent venous contrast pooling)[1],及时识别该征象可以争取抢救时机,否则会影响患者预后,我们在工作中遇到1例,现报告如下。

1 临床资料

患者,女性,70岁,发病前1 d无明显诱因出现腹痛、腹胀。在当地医院治疗后病情加重,由当地医院于2013年8月11日转入我院急诊科。转运途中患者出现呼吸困难,意识障碍。入院查体:体温37 ℃,心率123 /min,血压77/56 mmHg。在我院急诊科给予气管插管,呼吸机辅助通气,胸外心脏按压,补液,血管活性药物维持血压等处理后转入我院ICU进一步诊治。转入ICU后医师给予患者补液、升压等处理,同时给予心电监护。因患者病情无缓解,血压不能维持到正常范围,遂由ICU医师陪同患者来放射科进行全腹部增强CT检查。CT检查时间为18:40,检查过程中发现"从属性静脉对比剂淤积征",立即结束检查返回ICU。19:46患者突发心脏骤停,立即心肺复苏,心跳恢复,但患者仍处于休克状态,意识丧失,腹腔穿刺抽出黄色脓性液体,诊断:①感染性休克,②急性心力衰竭,③消化道穿孔。CT检查当天患者家属放弃治疗出院,出院后患者死亡。

扫描CT机为GE公司64排VCT,扫描参数120 kV,360 mA。造影剂浓度350 g/L,造影剂速率3.5 mL/s,动脉期延时24 s。CT增强图像显示患者心脏内无造影剂,下腔静脉造影剂淤积(图1A),肝静脉、门静脉及肝右叶对比剂淤积(图1B)右肾静脉造影剂淤积,腹腔内大量积液(图1C)。



A:CT增强显示患者心脏内无造影剂,下腔静脉造影剂淤积;B:肝静脉、门静脉及肝右叶对比剂淤积;C:右肾静脉造影剂淤积,腹腔积液 ↑:示观察点

图1 从属性静脉对比剂淤积征患者胸腹部CT表现

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2 讨论

2000年,Stoger[2]首次报道了心脏骤停的CT影像特点,即对比剂淤积在右侧身体的从属性静脉,包括静脉系统和肝右叶等。此影像特点还可以发生在急性心衰和即将发生心源性休克(impending cardiogenic shock)的患者[2-4]。后由Roth等[1]命名为"从属性静脉对比剂淤积征",一旦发生该征象,即使给予及时心肺复苏也难以挽救患者生命,一般在48 h内死亡[1,4]。

造成以上影像学特点的机制如下[2-4]:心脏骤停、急性心衰和心源性休克患者,其心脏的泵功能缺失,用于增强的注射器在注入对比剂的过程中产生推力,将未被血液稀释的对比剂反向推入下腔静脉和腹腔从属性静脉,从而导致相应的静脉系统、右侧肝脏甚至于右侧肾脏内的静脉血管显著强化。充血性心力衰竭、三尖瓣关闭不全和缩窄性心包炎的患者,在进行胸腹部增强CT检查时,也可以发现对比剂在右心、冠状窦和下腔静脉淤积的现象,但对比剂不会在腹腔静脉乃至于右肾静脉淤积,由此可以鉴别[5]。

CT检查临床常见,在患者接受检查前临床医生和CT技术员应该确保其临床状况稳定,对于生命体征等不平稳的患者,确实需要接受CT检查,CT操作人员应该与临床医生沟通,评估其耐受程度,针对那些临床状况不稳定的患者,在CT检查前、检查过程中和检查完后一段时间内,都应密切给予肉眼和心电监护检测,一旦发现从属性静脉对比剂淤积征,技术员应该立即停止操作,通知临床医师,给予及时有效的抢救措施。

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