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以不典型疼痛为首发症状的先天性腹内疝1例报告及文献复习

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[摘要] **目的:** 探讨先天性腹内疝患者的临床特征、诊断过程 and 治疗方法, 总结在诊治过程中可能出现的误区, 旨在提高临床医生对该病的认识。**方法:** 收集1例先天性腹内疝患者的临床资料和辅助检查结果, 分析上述资料并进行相关文献复习。**结果:** 患者, 男性, 65岁, 2d前因中上腹疼痛就诊于当地医院, 于当地医院检查未见明显异常, 血糖 $>25\text{ mmol}\cdot\text{L}^{-1}$, 予以降糖、补液和血液净化治疗后, 患者病情加重, 出现意识不清、血压下降和呼吸困难, 为求进一步诊治于本院就诊。入院后予以液体复苏、机械通气和支持治疗后, 患者症状未见好转, 由介入科行腹腔动脉和右侧股静脉造影, 未见明显腹部血管病变。予以腹腔穿刺引出混合血性液体, 考虑为腹腔隐匿性疾病, 遂行剖腹探查术。术中诊断为腹内疝、小肠坏死和感染性休克, 行小肠部分切除术、吻合术、黏连松解术和腹腔冲洗引流术。术后患者恢复良好, 于术后14d康复出院。**结论:** 先天性腹内疝是一种非常少见的成年患者肠梗阻的原因, 高度怀疑腹内疝是非典型急腹症的鉴别诊断之一, 早期多学科干预可以挽救患者生命。

[关键词] 腹内疝; 糖尿病高渗状态; 乳酸酸中毒; 脓毒症休克; 不典型疼痛

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Congenital intrabdominal hernia with atypical pain as first manifestation: A case report and literature review

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ABSTRACT Objective: To discuss the clinical characteristics, diagnosis processes, and treatment methods of one patient with congenital intrabdominal hernia, and to summarize the potential misconceptions during the diagnostic and treatment processes, and to improve the clinicians' awareness of this disease. **Methods:** The clinical data and auxiliary examination results of one patient with congenital intrabdominal hernia were collected and analyzed, and the related literatures were reviewed. **Results:** The patient, a 65-year-old male, sought care at the local hospital due to upper abdominal pain before 2 d; there were no significant abnormalities in the examination results at the local hospital; blood glucose $>25\text{ mmol}\cdot\text{L}^{-1}$. After receiving hypoglycemic, rehydration, and blood purification treatment, the condition of the patient

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was worsened, presenting with confusion, hypotension, and respiratory distress; the patient admitted in our hospital for further diagnosis and treatment. After admission, the patient was given despite fluid resuscitation, mechanical ventilation, and supportive treatment, but there was no improvement in the symptoms; interventional radiology was performed angiography of the abdominal artery and right femoral vein, which showed no significant vascular abnormalities in the abdomen. An abdominal paracentesis yielded a mixed bloody fluid, suggesting the concealed intraperitoneal disease; exploratory laparotomy was performed. During operation, the intrabdominal hernia with small intestine necrosis and septic shock were diagnosed, and partial small intestine resection, anastomosis, adhesiolysis, and abdominal irrigation and drainage were carried out. The patient had a good recovery and was discharged on the 14th day after operation. **Conclusion:** Congenital intrabdominal hernia is a very rare cause of intestinal obstruction in the adults, and high suspicion for intrabdominal hernia is one of the differential diagnosis for atypical acute abdomen; early multidisciplinary intervention can be lifesaving for the patients.

KEYWORDS Intrabdominal hernia; Diabetic hypertonic state; Lactic acidosis; Septic shock; Atypical pain

腹部疝是普通外科常见的疾病之一^[1],即人体腹腔内某个脏器或组织离开其正常解剖位置,通过先天或后天形成的薄弱点、缺损或孔隙进入另一部位^[2],常需手术治疗。在临床上,腹外疝尤其是腹股沟斜疝占多数^[3]。在国内外报道中,因手术导致的后天获得性腹内疝发生率占腹内疝的90%以上^[4-8],而先天性腹内疝发生率仅占腹内疝的5%~10%^[9-10]。腹内疝早期疼痛症状不典型,部分可自行缓解,给早期诊断带来了极大的挑战^[11-12]。先天性肠系膜疝是一种腹内疝,也是非常罕见的成人肠梗阻的原因。本研究通过回顾分析1例以不典型疼痛为首发症状,因严重糖尿病和昏迷造成病因性诊断干扰,继而发生肠管缺血、坏死和脓毒症休克的腹内疝病例,探讨其发生发展过程,以提高临床工作者对该病的认识,为先天性腹内疝提供新的诊疗思路。

1 临床资料

1.1 一般资料 患者,男性,65岁。于2023年1月10日无明显诱因出现间断性中上腹痛,无放散,伴恶心和呕吐,无呕血及黑便。患者自行口服索密痛和黄连素后,症状未见缓解,约8h后就诊于当地医院综合内科行血液生化和腹部超声检查。血常规:白细胞(white blood cell, WBC) $12.1 \times 10^9 \text{ L}^{-1}$,中性粒细胞(neutrophilic granulocyte, NEUT)百分率79.6%,红细胞(red blood cell, RBC) $5.82 \times 10^{12} \text{ L}^{-1}$,血红蛋白(hemoglobin, HGB) $141 \text{ g} \cdot \text{L}^{-1}$,红细胞比容(hematocrit, HCT) 0.458,血小板(platelet, PLT) $236 \times 10^9 \text{ L}^{-1}$ 。血糖 $>25 \text{ mmol} \cdot \text{L}^{-1}$,淀粉酶 $171 \text{ mmol} \cdot \text{L}^{-1}$,

离子未见明显异常。尿常规:RBC $50 \mu\text{L}^{-1}$, WBC $80 \mu\text{L}^{-1}$,尿糖3+,酮体3+。腹部超声显示:腹腔积气,余未见明显异常。当地医院予以补液、降糖和抗感染治疗,6h后症状未见好转,行腹部CT检查,回报未见明显异常。10h后患者逐渐出现嗜睡,急检血气分析结果显示:血pH 7.12,血氧分压(partial pressure of oxygen, PO_2) 72 mmHg,二氧化碳分压(partial pressure of carbon dioxide, PCO_2) 33 mmHg, HCO_3^- $9.0 \text{ mmol} \cdot \text{L}^{-1}$,乳酸(lactic acid, Lac) $5.6 \text{ mmol} \cdot \text{L}^{-1}$,考虑患者病情重,高血糖所致酮症酸中毒可能性大,不排除感染性休克并发乳酸酸中毒,与家属沟通病情后,予以右侧股静脉穿刺,行血液净化治疗(模式、流速和超滤量不详)。治疗约12h,患者病情加重,呈昏迷状态,刺痛有反应,伴呼吸浅快,再次复查血气分析显示:血pH 7.28, PO_2 58 mmHg, PCO_2 27 mmHg, HCO_3^- $12.5 \text{ mmol} \cdot \text{L}^{-1}$, Lac $7.8 \text{ mmol} \cdot \text{L}^{-1}$,各检查指标未见好转,为求进一步诊治转至本院,急诊以“糖尿病高渗性昏迷、乳酸酸中毒”收入本院创伤中心综合病区(外科重症监护病区)。专科查体:身高165 cm,体质量76 kg,体质量指数(body mass index, BMI) $27.9 \text{ kg} \cdot \text{m}^{-2}$ 。昏迷状态,刺痛偶有反应。体温 $36.2 \text{ }^\circ\text{C}$,心率 158 min^{-1} ,血压 $89/59 \text{ mmHg}$ (多巴胺 $0.4 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$ 泵入中),呼吸 36 min^{-1} 。双侧瞳孔等大,直径约2.5 mm,对光反射迟钝。口唇发绀,气道居中,双肺呼吸音减弱,双下肺可闻及散在细湿啰音。心音不齐,瓣膜区未闻及杂音,心率 $>$ 脉率。腹部膨隆,质软,中下腹触压患者有表情改变,叩诊腹部呈鼓音,未

闻及肠鸣音。四肢皮肤温度低, 无明显肿胀及凹陷性水肿, 肌张力不高, 病理反射未引出。患者既往房颤病史15年, 发作时多次就医, 平时未系统治疗; 糖尿病病史8年, 未规律治疗, 平时血糖水平不详; 无高血压病史, 无腹部慢性疾病病史。

1.2 实验室检查和辅助检查 血常规: WBC $15.6 \times 10^9 \text{ L}^{-1}$, NEUT 百分率 85.2%。血糖 $18.9 \text{ mmol} \cdot \text{L}^{-1}$, 淀粉酶 $236 \text{ mmol} \cdot \text{L}^{-1}$, Na^+ $152 \text{ mmol} \cdot \text{L}^{-1}$, K^+ $3.3 \text{ mmol} \cdot \text{L}^{-1}$, Ca^{2+} $1.86 \text{ mmol} \cdot \text{L}^{-1}$, Cl^- $115 \text{ mmol} \cdot \text{L}^{-1}$ 。尿淀粉酶 $452 \text{ U} \cdot \text{L}^{-1}$ 。尿常规: RBC $40 \mu\text{L}^{-1}$, WBC $60 \mu\text{L}^{-1}$, 尿糖3+, 酮体2+。肾功能: 血清尿素氮 (blood urea nitrogen, BUN) $12.5 \text{ mmol} \cdot \text{L}^{-1}$, 血清肌酐 (serum creatinine, Scr) $124.4 \mu\text{mol} \cdot \text{L}^{-1}$ 。肝功能: 丙氨酸氨基转移酶 (alanine aminotransferase, ALT) $68 \text{ IU} \cdot \text{L}^{-1}$, 天冬氨酸氨基转移酶 (aspartate aminotransferase, AST) $85 \text{ IU} \cdot \text{L}^{-1}$, 总胆红素 (total bilirubin, TBIL) $37 \mu\text{mol} \cdot \text{L}^{-1}$, 直接胆红素 (direct bilirubin, DBIL) $15 \mu\text{mol} \cdot \text{L}^{-1}$, 间接胆红素 (indirect bilirubin, IBIL) $22 \mu\text{mol} \cdot \text{L}^{-1}$, 血清总蛋白 (total protein, TP) $52 \text{ g} \cdot \text{L}^{-1}$, 血清白蛋白 (albumin, ALB) $26 \text{ g} \cdot \text{L}^{-1}$, 前白蛋白 (prealbumin, PALB) $98 \text{ g} \cdot \text{L}^{-1}$, 降钙素原 $6.15 \mu\text{g} \cdot \text{L}^{-1}$ 。血气分析: 血 pH 7.56, PO_2 46 mmHg, PCO_2 23.6 mmHg, HCO_3^- $18.5 \text{ mmol} \cdot \text{L}^{-1}$, Lac $6.5 \text{ mmol} \cdot \text{L}^{-1}$ 。心电图显示: 心室率 156 min^{-1} , 心房纤颤。头部CT显示: 双侧基底节区腔隙性脑梗死。肺部CT显示: 右肺下叶背段可见少量渗出影, 无积液。腹部CT显示: 胃体明显扩张, 小肠壁部分水肿, 肠腔扩张, 肾周渗出性改变, 双侧结肠旁沟积液, 最大径约2 cm, 盆腔积液, 最大径约3 cm。

1.3 治疗措施 入院后立即给予维持生命体征、液体复苏、改善氧合和支持治疗。因患者缺氧症状明显, 予以紧急气管插管, 呼吸机辅助通气 (压力控制呼吸模式, 吸入氧浓度60%, 呼吸频率 13 min^{-1} , 压力支持水平 $8 \text{ cmH}_2\text{O}$, 呼气末正压 $5 \text{ cmH}_2\text{O}$)。留置胃肠减压, 患者在当地医院尿量约800 mL, 暂未继续行血液净化治疗。入院3 h后, 患者一般状态未见好转, 生命体征差, 中度昏迷, 心率 135 min^{-1} , 血压 $99/63 \text{ mmHg}$ (去甲肾上腺素 $0.04 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$ 联合多巴胺 $0.5 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$ 维持), 呼吸频率 32 min^{-1} , 血氧饱和度95%。结合患者房颤病史, 在转运呼吸机支持下, 于入院后

4 h行腹部介入检查, 术中行肝动脉、肠系膜上、下动脉和右侧股静脉造影, 血管腔未见明显狭窄和管壁异常。入院后6 h, 行床头超声检查发现胸腔和腹腔积液较入院时增多, 在床头彩超引导下, 予以胸腔和腹腔穿刺引流置管, 双侧胸腔引出暗黄色液体约600 mL, 双下腹引出混合红色液体约800 mL。留置胃肠减压引流液为墨绿色, 约2 000 mL。

1.4 手术方法 患者一般状态变差, 机械通气, 微量镇静中, 脉搏 145 min^{-1} , 血压 $105/67 \text{ mmHg}$ (去甲肾上腺素 $0.8 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$ 联合多巴胺 $0.5 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$ 维持), 呼吸频率 30 min^{-1} , 血氧饱和度93%, 四肢末端皮肤出现花斑。血气分析: 血 pH 7.46, PO_2 58 mmHg, PCO_2 27 mmHg, HCO_3^- $13.5 \text{ mmol} \cdot \text{L}^{-1}$, Lac $10.2 \text{ mmol} \cdot \text{L}^{-1}$ 。由于腹腔引流持续增加, 颜色加深为混合血性, 与家属沟通后, 于入院后8 h在全麻下行开腹探查术。术中见肝周、脾窝、肠间和盆腔大量淡红色积液, 探查见小肠从距屈氏韧带约50 cm开始至距回盲部约120 cm处颜色暗红, 水肿明显, 肠腔扩张较重, 较宽处小肠直径约6 cm, 并可见局部大网膜与小肠系膜形成黏连带, 卡压距回盲部约150 cm处小肠, 卡压处小肠颜色暗红, 水肿明显, 肠腔扩张 (图1)。术中诊断为腹内疝、小肠坏死和感染性休克。行黏连松解术, 小肠部分切除, 肠吻合术, 腹腔冲洗引流术 (图2)。手术顺利, 历时100 min, 术后患者返回监护病房。

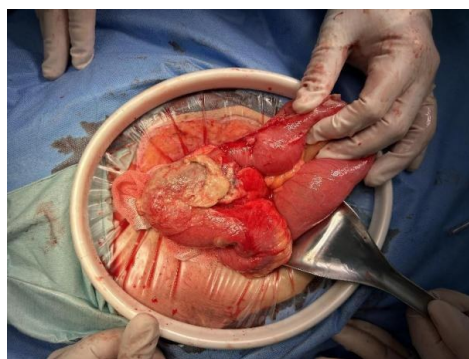


图1 先天性腹内疝患者术中所见

Fig. 1 Findings of patient with congenital intrabdominal hernia during operation

1.5 转归 患者术后继续行机械通气、抗炎和保护脏器功能等综合治疗, 一般状态逐渐好转, 心率和血压渐平稳, 升压药量需求减少, 四肢末梢灌注改善。术后2 h复查血气分析: 血 pH 7.37, PO_2



图2 先天性腹内疝患者手术切除的肿胀坏死部分小肠组织

Fig. 2 Swollen necrotic portion of small intestine tissue of patient with congenital intrabdominal hernia removed by operation

75 mmHg, PCO_2 32 mmHg, HCO_3^- 18.2 mmol·L⁻¹, Lac 3.9 mmol·L⁻¹。术后第2天,患者停用升压药物,并于术后第3天脱离呼吸机,通过自主呼吸试验(spontaneous breathing trial, SBT),拔除气管插管。术后第5天,患者腹腔引流量小于50 mL,予以鼻饲清水。术后第6天,患者转至普通病房继续治疗。术后第10天,患者腹腔引流拔除,开始经口进食。术后第13天,患者复查消化道造影,胃排空速度正常,于术后第14天出院。术后3个月随访患者恢复良好,无明显不适。

2 讨论

腹内疝是腹腔脏器通过腹腔内先天或后天的孔或腹膜后窝突出而形成,分为获得性和先天性。与腹股沟疝不同的是,突出物是向内进入腹腔而不是突向体外。如果无可察觉的临床指征,CT影像检查技术可辅助腹内疝的诊断^[13-15]。

腹内疝常因未能及时准确诊断而带来不良预后,文献^[16]报道:腹内疝病死率为50%以上。大多数腹内疝位于十二指肠旁(53%),其他类型的腹内疝有Winslow孔疝(8%)、盲肠周围疝(13%)、乙状结肠间疝(6%)、肠系膜疝(8%)以及吻合后疝、膀胱上疝和骨盆疝(6%)^[17-18]。肠系膜疝是指通过小肠、肠系膜或结肠系膜形成的疝,占有腹内疝的4%~8%^[10],以儿童较为多见^[2]。在成年患者中,腹内疝形成大多数是由于手术造成的腹腔内开口,如Roux-en-Y手术,此外还有炎症和创伤^[19-21]。

本文作者报道了1例以不典型上腹痛为首发症状的腹内疝患者,无其他典型急腹症体征。该例患

者在当地医院诊断为糖尿病高渗状态并发酮症酸中毒和乳酸酸中毒,经积极降糖补液和血滤治疗纠正酸中毒及清除代谢产物后症状未见好转。患者入本院后出现急进性多器官功能衰竭迹象,且经血液净化治疗未见效果,提示酸中毒为继发表现,无法以上述病因予以解释,不除外脓毒症所导致的休克,找到真正的感染灶至关重要。患者的高渗性昏迷间接掩盖了腹部主要症状,查体体征不够确切。因患者房颤病史,也考虑到心房栓子脱落所导致的肠系膜动脉血栓,紧急行介入检查后予以排除,同时也排除了股静脉穿刺失误可能造成的隐性失血所导致的休克。在床头彩超协助下,行腹腔诊断性穿刺,引出混合血性液体,考虑存在腹腔隐匿性疾病,紧急行剖腹探查,最终明确患者为肠系膜疝、肠梗阻、肠坏死和脓毒症休克。

腹内疝是Roux-en-Y手术术后常见并发症之一^[22-25]。该例患者无任何手术史或创伤史,故入院诊治过程中未考虑腹内疝的可能性。患者以高渗性昏迷、代谢性酸中毒和脓毒症休克入院,当地医院早期行腹部CT检查和超声检查未见明显异常;对症给予治疗后,症状没有得到控制,反而持续和迅速恶化促使医生考虑其他鉴别诊断。腹内疝患者临床病情发展迅速,临床症状隐匿且不典型,早期诊断困难,晚期可从不典型腹痛发展到间歇性梗阻症状,也可进展为急性梗阻,发生肠道卡压会有渗出和坏死,引起腹膜炎^[26]。腹内疝晚期时CT影像可以提供更多的鉴别诊断依据,但已错过最佳干预时机。

患者一旦确诊为腹内疝,应立即行手术治疗,才可避免病情进一步加重。腹内疝作为非典型急腹症之一,较难鉴别,充分利用床旁检查手段关注病情变化,早期多学科干预可以及时挽救患者生命。

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