

# 重症急性胰腺炎内镜治疗进展

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**关键词** 重症急性胰腺炎; 并发症; 内镜; 治疗

**中图分类号** R576 **文献标识码** A **DOI** 10.11768/nkjwzzzz20210102

急性胰腺炎(acute pancreatitis, AP)是临床常见的急腹症之一,可由多种病因引起,包括胆道疾病、酒精性、高脂血症及药物等。绝大多数AP属于轻症,具有自限性且预后良好,约20%为中度或重度急性胰腺炎。中度重症急性胰腺炎(moderate severe acute pancreatitis, MSAP)以一过性器官功能障碍(持续时间<48 h)或者出现局部或全身并发症为特征,而重度的重症急性胰腺炎(severe acute pancreatitis, SAP)的器官功能障碍持续>48 h<sup>[1,2]</sup>。随着消化科、外科、介入放射科、重症监护医学、感染科和营养科的多学科综合治疗及护理模式的开展,SAP的死亡率较前显著降低,但是仍存在较高的致残率<sup>[3]</sup>。

近年来内镜技术、尤其是超声内镜(endoscopic ultrasonography, EUS)越来越多的应用于SAP及其并发症的诊治。

## 内镜逆行胰胆管造影及EUS在SAP病因诊断和治疗的应用

胆石症目前仍是我国AP的主要病因<sup>[4]</sup>。为了避免不必要的内镜逆行胰胆管造影(endoscopic retrograde cholangiopancreatography, ERCP),目前的指南建议,AP患者应在入院前或入院后48 h内行经腹超声检查,如腹部超声检查无法明确病因,则需进一步行磁共振胰胆管成像(magnetic resonance cholangiopancreatography, MRCP)或超声内镜检查<sup>[5]</sup>。研究表明,MRCP在显示胆道梗阻存在与否和程度方面总体敏感性及特异性良好,但随着结石大小的不同,结石检出的敏感性不同。当结石直径>10 mm时,其检出敏感性为60%~100%,直径为6~10 mm时,敏感性为89%~94%,直径<6 mm时,敏感性仅为33%~71%<sup>[6]</sup>。因此,对于直径<6 mm的微小结石,MRCP的检出率将明显降低,漏诊率将会提高。国内外多项研究发现,EUS与MRCP诊断胆总管结石的总体敏感度及准确度方面几乎相

等,但EUS对直径<6 mm的微小结石或胆道泥沙样结石的敏感性明显高于MRCP<sup>[7-9]</sup>。EUS将内镜技术与超声技术结合起来,在内镜的直视下对胆道及其邻近脏器进行断层扫描,有效避免肠道气体的干扰,提高疾病的诊断率。

目前国内外指南建议,伴发胆总管结石嵌顿且有胆管炎的急性胆源性胰腺炎患者(acute biliary pancreatitis, ABP),入院24 h内行ERCP术;伴发胆总管结石嵌顿但无明确胆管炎的患者,入院72 h内行ERCP术;不伴胆总管结石嵌顿或急性胆管炎的ABP,不建议急诊行ERCP术<sup>[4,10]</sup>。有研究指出,在不合并胆管炎的胆道梗阻的ABP患者中,ERCP干预时机对ABP患者的死亡率、局部和全身并发症的发生率没有明显影响<sup>[11]</sup>。2018年的一项小样本回顾性研究<sup>[12]</sup>指出,急诊ERCP(24 h内)与择期早期ERCP(24~72 h)的2组患者住院时间及并发症的发生率没有统计学差异。因此,目前对于不合并胆管炎的胆道梗阻的ABP患者的ERCP干预时机仍存在争议,但是更倾向不予以ERCP治疗。

## 内镜技术在SAP并发症中的应用

**SAP局部并发症的内镜治疗** 2012年修正后的亚特兰大分类根据并发症出现的时间及是否有坏死,将SAP的局部并发症分为急性胰周液体积聚(acute peripancreatic fluid collection, APFC)、急性坏死物积聚(acute necrotic collection, ANC)、胰腺假性囊肿(pancreatic pseudocyst, PPC)、包裹性坏死(walled-off necrosis, WON)<sup>[1]</sup>。目前临床主张对于无感染、无症状的局部并发症先采取保守治疗,部分可在发病后数周内自行消失,无需干预。对于合并感染、有症状的局部并发症,采取干预治疗。

胰腺炎局部并发症的传统干预治疗为开腹手术,但由于其术后并发症的发生率及病死率高,目前已逐步被微创治疗所替代。微创治疗包括在B超/CT引导下经皮穿刺引流(percutaneous catheter drainage, PCD)和超声内镜引导下经胃/十二指肠

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穿刺引流(endoscopic transmural drainage, ETD)。若引流效果不佳,则进一步行清创治疗,这一理念称为微创升阶梯治疗。多项研究报告,微创升阶梯治疗在死亡率和并发症的发生率等多方面均优于开腹手术<sup>[13~15]</sup>。

临床上主张根据局部并发症的位置及大小选择微创治疗方式。对于与胃或者十二指肠的距离 $\leq 1$  cm的 PPC 选择经胃/十二指肠穿刺;而经皮穿刺引流更适合于直径较大( $>10$  cm)或位置较低的坏死。荷兰胰腺炎研究小组在2018年发布的一项多中心随机试验中发现,内镜升阶梯治疗与外科相比,尽管两者在死亡率方面并无统计学差异,但是内镜下微创升阶梯治疗可降低胰瘘的发生率并缩短住院时间<sup>[16]</sup>。目前两种不同入路的微创升阶梯治疗之间哪一种更优尚无定论。关于穿刺治疗的时机,既往主张尽可能推迟干预时间,使得坏死有充分的时间形成囊壁及液化,有利于提高穿刺的成功率并且减少并发症,但这主要源于对开腹清创术的研究。而对于置管引流,尤其 PCD 无需延迟干预。Triku-danathan 等<sup>[17]</sup>认为,当 SAP 患者发生器官衰竭时,应早期( $<4$  周)进行干预,使得器官衰竭有所改善,且并发症不会增加,死亡率相对较低。故2020年美国胃肠病协会指南提出 IPN 或有症状的坏死物聚集应在早期( $<2$  周)行 PCD 引流<sup>[3]</sup>。

在早期,超声内镜引导下经胃/十二指肠穿刺后可以放置双猪尾塑料支架及鼻囊肿引流管进行引流。随着金属支架的应用,目前发现双蘑菇头金属支架在临床成功率及并发症的发生率方面优于塑料支架<sup>[18, 19]</sup>。我们建议,在较小的 PPC 病例中选择塑料支架,而直径较大的 PPC 或者合并感染的 WON 病例选择金属支架<sup>[20]</sup>,当坏死直径较前吸收后,可以将金属支架更换为塑料支架。

**胰管断裂及胰瘘的内镜治疗** 胰管断裂后,胰液在胰管上皮和其他上皮组织之间的异常交通称为胰瘘<sup>[21]</sup>。胰瘘是急、慢性胰腺炎和腹部外科手术特别是胰腺手术和外伤后严重的并发症之一。重症胰腺炎特别是发生于胰头部的 SAP 并发的胰管断裂的发生率仍然较高。一旦识别为胰瘘,应尽早进行干预。大多数胰瘘患者经保守治疗,包括营养支持、纠正水电解质紊乱、生长抑素类似物应用等,瘘口可自行闭合<sup>[22]</sup>;保守治疗无效的患者,可行 ERCP 胰管支架置入术及胰液引流干预治疗。多项研究已证明内镜下胰管支架置入术治疗胰瘘的有效性<sup>[23, 24]</sup>。

**消化道瘘的内镜治疗** 消化道瘘是胰腺炎病程

后期阶段出现的并发症之一。消化道瘘必须早期识别,积极处理,避免由于瘘口的持续存在,消化液、食物进入胸腔、腹腔,造成严重感染。采取禁食、胃肠减压能够在一定程度上缓解刺激因素,却也因此阻断了患者营养摄入,长时间禁食容易造成患者营养不良、免疫力降低,加重感染的扩散。而持续反复的感染又加重了机体消耗,如此恶性循环,致使消化道瘘迁延不愈。因此,及早采取措施封闭瘘口、尽早实行肠内营养支持才是治疗消化道瘘的根本方法。目前可在内镜辅助下置入空肠营养管进行肠内营养支持,有利于改善患者的营养状况,加快瘘口的愈合。对于保守治疗无效的患者,可在内镜辅助下置入覆膜支架、钛夹夹闭、生物凝胶封堵术以封闭瘘口<sup>[25]</sup>。

## 结 语

随着内镜技术不断发展,其在 SAP 及其并发症的诊治过程中发挥着越来越重要的作用,能够有效避免开腹手术,从而减少患者遭受原发病之外的手术打击,降低患者的死亡率及并发症的发生率,改善患者的生存质量。随着内镜诊疗方案的不断完善,未来将会有更多的重症急性胰腺炎患者受益。

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(2021-01-25 收稿)