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急性胰腺炎中内镜技术的应用及研究进展

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摘　要

内镜在急性胰腺炎的诊疗中具有重要的价值。在病因诊断方面，超声内镜(endoscopic ultrasound, EUS)已成为诊断胆源性胰腺炎最敏感的工具。在治疗上，经内镜逆行性胆胰管造影(endoscopic retrograde cholangiopancreatography, ERCP)是处理胆源性胰腺炎的首选方案；同时其在治疗胆胰解剖异常所致急性胰腺炎中具有重要价值。EUS联合ERCP术、ERCP联合胆囊切除术等新的手术模式均为急性胰腺炎的病因防治提供了新的思路。在治疗胰腺炎局部并发症中，经广泛的临床实践及研究表明内镜升阶梯治疗模式是临床疗效可靠、安全性高的微创治疗方案。

关键词

内镜，急性胰腺炎

Review on Application and Research Progress of Endoscopic Techniques in Acute Pancreatitis

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Abstract

Endoscopy plays an important role in the diagnosis and treatment of acute pancreatitis (AP). Endoscopic ultrasound (EUS) has become the most sensitive diagnostic tool for biliary AP. Endoscopic retrograde cholangiopancreatography (ERCP) is the first choice for the treatment of biliary pan-

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creatitis. Meanwhile, it has important value in the treatment of AP caused by biliopancreatic abnormality. EUS combined with ERCP and ERCP combined with cholecystectomy provide new ideas for etiological prevention and treatment. According to previous clinical practice and researches, endoscopic step-up strategy is a minimally invasive treatment with reliable clinical efficacy and high safety in the treatment of local complications.

Keywords

Endoscopy, Acute Pancreatitis

1. 引言

急性胰腺炎是消化系统常见的急危重症之一，其病因包括胆石症、酒精、高甘油三酯血症、外伤、胆胰汇合畸形等[1]。轻症急性胰腺炎无全身及局部并发症，其预后较好；然而中－重症及重症急性胰腺炎存在全身和(或)局部并发症，仍具有较高的死亡率[2] [3]，因此如何及时且有效地处理并发症成为改善急性胰腺炎预后的重要因素。随着近 20 年来内镜技术的发展及最小化侵入性治疗概念的提出，以内镜技术为基础的诊疗方案为处理各类急性胰腺炎相关的临床问题提供了新的可能性及有效的方案；降低了 AP 相关的并发症的发生率、改善了患者的预后[4]。因此，本文将对内镜在急性胰腺炎诊疗中的应用及研究进展进行综述。

2. 内镜在急性胰腺炎病因诊断中的应用

急性胰腺炎病因诊断中，经内镜下逆行性胆胰管造影(endoscopic retrograde cholangiopancreatography, ERCP)和超声内镜(endoscopic ultrasound, EUS)具有重要的价值。ERCP 自 1968 年问世以来[5]不断发展完善，现仍被认为是急性胆源性胰腺炎诊断的金标准，但由于其侵入性、不良反应等局限性并非用于诊断的理想工具。随着近年来影像学技术的发展，磁共振胆胰管成像(magnetic resonance cholangiopancreatography, MRCP)及 EUS 越来越受到重视；目前指南推荐在胆总管结石(common bile duct stone, CBDS)的诊疗中，应以 EUS 和(或)MRCP 检查结果作为依据[6]。事实上，已有大量的研究发现在诊断 CBDS 时，EUS 的诊断效力优于 MRCP；EUS 诊断的正确率约为 40%~70%，而 MPCP 仅为 12%~30% [7] [8] [9]。然而 EUS 对操作者经验要求高，费用较昂贵，目前尚无法成为急性胰腺炎病因诊断的首选检查手段。但在评估常规检查仍无法明确急性胰腺炎的病因时，EUS 具有重要的意义[8]。据研究报道，特发性或不明原因的急性胰腺炎的比例约为 10%~30%；由于病因不明，这一类急性胰腺炎极易复发[10]。已有的回顾性研究发现，EUS 可发现 60%~70%特发性急性胰腺炎的病因[9] [10]。由于国内外仍缺乏大样本的 RCT 研究评估 EUS 在急性胰腺炎中的使用时机和患者获益、社会经济效益等之间的关系[11]，如何恰当地使用 EUS 进行病因学诊断仍需进一步研究。

3. 内镜在治疗急性胰腺炎中的应用

3.1. 内镜治疗胆源性胰腺炎

胆源性胰腺炎是成年人急性胰腺炎最常见的类型，其中又以胆石症最为常见[12]。ERCP 是处理胆总

管结石引起的胆源性胰腺炎重要的治疗手段。虽然目前的指南和 RCT 研究结果并不支持胆源性胰腺炎患者在早期应用 ERCP，除非其合并有胆管炎或持续胆汁淤积的表现[4] [13]；但 ERCP 对去除病因，防止复发的临床价值却不容忽视；此外，与外科手术及胆道镜探查相比，ERCP 具有微创、平价等特点，目前已被指南推荐为处理胆总管结石的首选方案[14]。在临床实践中，ERCP 治疗也存在诸多限制，例如解剖结构异常或困难插管的患者常无法实施 ERCP 治疗[15]；目前已有多家医疗中心探讨 EUS 联合 ERCP 的手术模式在治疗胆源性胰腺炎中的应用；主要包括在 ERCP 术中辅助探查有无结石残留[15]，外科术后解剖结构改变患者经肠行 ERCP [16]等。

由于绝大部分的胆总管结石来源于胆囊，ERCP 术后及时处理胆囊结石对于防止胆源性胰腺炎复发具有重要的意义；目前国内外已有多家机构开展 ERCP 联合 LC 手术的处理方式，其结果证实 ERCP 联合 LC 手术的安全性及有效性，并且该术式能显著降低术后胰腺炎及总体并发症的发生率，缩短住院时间，减轻患者痛苦及医疗费用负担[17] [18]。但由于目前对于病因诊断、病因去除等意识有待加强，标准化急性胰腺炎的诊疗流程亟需在各大医疗中心加以实践。

3.2. 急性胰腺炎合并胆胰管发育异常

胰腺分裂症是一种较为常见的胆胰管发育异常的先天性疾病；其增加了罹患急性复发性胰腺炎的风险[19]。ERCP 在处理有显著流出道梗阻症状的胰腺分裂症具有一定的优势；通过各种途径扩张副乳头(副乳头括约肌切开、球囊扩张、置入胰管支架)可减轻胰管内压力，从而防止胰腺炎复发[11]。目前一项多中心回顾性研究发现 ERCP 对复发性胰腺炎合并胰腺分裂症者临床有效率为 48% [20]。如何提高内镜下治疗的临床有效率，内镜下扩张治疗时间、干预次数以及不良反应的风险因素等仍有待进一步研究[11]。

3.3. 胰腺炎局部并发症的治疗

胰腺炎的局部并发症包括：急性胰周液体积聚，胰腺假性囊肿；急性坏死物积聚，包裹性坏死。EUS 是内镜下治疗胰腺炎局部并发症的基石；其作用在于 EUS 成像及 EUS 引导下穿刺。

3.3.1. 内镜在胰周液体积聚/胰腺假性囊肿治疗中的应用及优势

根据国内外的指南，急性胰周液体积聚及无症状的胰腺假性囊肿无需进一步的处理，而有症状的假性囊肿则主要采取引流囊液的方式进行干预[14]。目前，EUS 引导下引流术已被认为是胰腺假性囊肿治疗的首选方案，其治疗效果优于经皮及外科引流术[21]。以 EUS 为基础的引流途径可分为经十二指肠乳头途径及经腔壁途径(包括胃壁、十二指肠壁)。在 EUS 引导下进行穿刺，安置支架引流囊液至胃腔或肠腔中。目前国内外可使用引流支架材质主要分为腔内金属支架(lumen-apposing metal stents, LAMSs)和双猪尾形塑料支架(double-pigtail plastic stents, DPPSs)。与 DPPSs 相比，LAMS 具有更高的安全性和临床有效性，更短的手术时间，更少的经皮干预需求以及更低的不良事件总发生率[22]。

3.3.2. 内镜下升阶梯治疗急性坏死性液体积聚和包裹性坏死(Walled-off Necrosis, WON)

在治疗坏死性胰腺炎时，国内外指南并不推荐立即处理积聚的急性坏死性液体，而是将导管内引流推迟至 WON 阶段进行[23]。经皮引流与内镜引流均为一线非外科手术治疗 WON 的有效方式[24]。大量的 RCT 研究表明内镜引流与经皮引流短期临床疗效及长期临床结局相当；但内镜引流胰瘘的发生率更低，并且其显著降低了患者的住院时长，医疗费用，提高患者的生活质量[25] [26] [27] [28]。因此，EUS 引导的穿刺引流术已逐渐成为 WON 治疗的基础手段；在 WON 经引流没有改善的情况下，经壁囊肿连续灌洗(transmural nasocyst continuous irrigation, TNCCI) [29]或内镜下坏死组织清除术[30]可作为进一步干预的措施。此外内镜下手术方式的改进也提高了内镜下治疗的效果，例如联合过氧化氢灌注法[31]增加临床成功率、局部灌注抗生素降低术后感染[32]等。

目前对于塑料支架以及 LAMS 在 WON 中的应用尚存在争议。有研究发现 LAMS 治疗 WON 临床成功率更高，所需手术时间更短，复发率更低[33]。但也有一项 RCT 研究发现 LAMS 的临床结局与塑料支架无差别，且其不良反应高，费用昂贵[34]。因此，评估塑料支架以及 LAMS 在 WON 中的利弊、内镜下切除术并发症的评估及危险因素的干预、内镜升阶梯治疗 WON 时机以及不同术氏的选择标准仍有待进一步研究。

4. 总结

内镜技术的发展为解决急性胰腺炎相关的临床问题提供了新的解决方案。内镜在急性胰腺炎病因的寻找、去除中具有重要的价值，可有助于减少其复发率、改善预后。内镜升阶梯治疗胰腺炎局部并发症的优势已有广泛的理论和实践基础，其技术的改进将改变以往以外科为主的治疗理念。

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