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• 病例报告 Case report •

支气管动脉瘤血管内介入治疗 1 例并文献复习

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【关键词】 支气管动脉瘤; 纵隔积血; 栓塞

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Endovascular interventional treatment of bronchial aneurysm: report of one case with literature review LIU Yan, QIN Wei, ZHANG Ling, XIE Zhihao, YANG Guangqiang, LEI Yubo, YANG Shi. First Clinical Institute, Zunyi Medical University, Zunyi, Guizhou Province 563000, China

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支气管动脉瘤(bronchial artery aneurysm, BAA)是一种非常罕见的疾病,有研究^[1]报道在所有接受选择性支气管动脉造影的患者中仅发现不到 1%。支气管动脉瘤破裂是一种危急症,一旦发现应立即治疗,其治疗方法主要包括血管外科修复治疗及血管内介入栓塞。

1 临床资料

患者老年男性,因“突发胸背部疼痛 5 h”入院,院外急诊胸腹主动脉 CTA 示:胸主动脉壁间血肿。入院急诊胸腹 CTA 检查(图 1①②③):①支气管动脉增粗迂曲,局部动脉瘤形成,直径约 0.6 cm;②纵隔及主动脉旁混杂密度影,考虑支气管动

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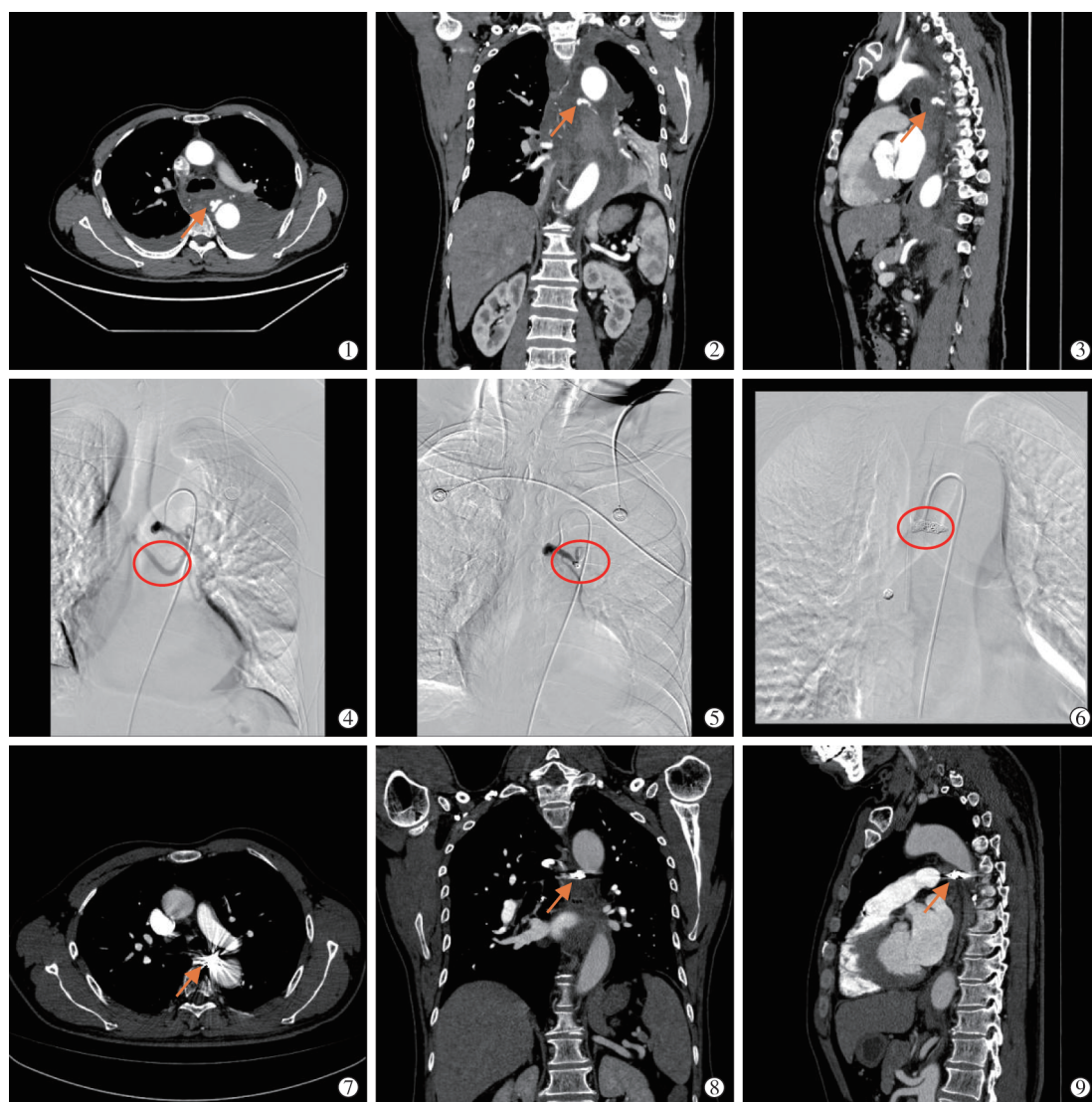
脉瘤破裂。全血五分类+全血超敏 C 反应蛋白及凝血功能：正常。血栓弹力图检测：K 时间(快速)2.2 min ↑。急诊行支气管动脉造影栓塞术，术中见支气管动脉近段大小约 0.7 cm×0.8 cm 的瘤样突出(图 1④)，左右支气管动脉共干，遂经导管缓慢注入适量 PVA 颗粒(560~710 μm 两支)，并于支气管动脉远端先后准确置入 7 个(4 mm×3 个、5 mm×2 个、6 mm×2 个)弹簧圈(图 1⑤)，之后准确置入 2 个(6 mm)弹簧圈入动脉瘤腔(图 1⑥)，术后复行 DSA 示栓塞满意。术后 48 d 复查 CT(图 1⑦⑧)：术区放射状高密度影，原动脉瘤周围积血明显吸收减少。

2 讨论

支气管动脉瘤是一种罕见的血管病变，具体病因尚不明确。目前提出了先天性和后天性因素，包括肺隔离症、发育不全、炎症、支气管扩张等。根据其发病位置可以分为肺内型、

纵隔型或两者兼有^[2]，纵隔型常见的症状包括严重的胸痛或背痛、血胸、纵隔出血，肺内型则以反复的咯血常见。支气管动脉瘤还应与假性动脉瘤鉴别。假性动脉瘤是一种更为罕见的现象，它是由于动脉壁损伤引起的血管壁外的血肿，并且包含外膜或介质或周围组织，血肿必须通过动脉壁的缺损与动脉管腔交通^[3]。支气管假性动脉瘤通常无明显症状，但破裂时可导致呼吸困难、咯血、呕血、血胸和出血性休克等症状。纵隔内假性动脉瘤容易误诊为纵隔内占位，其诊断的金标准为 DSA，它能够实时评估病灶造影剂的填充^[4]，并与纵隔占位及纵隔型支气管动脉瘤相鉴别。

目前尚无明确推荐方案治疗支气管动脉瘤或假性动脉瘤。研究报道中，纵隔型支气管动脉瘤或假性动脉瘤有几种治疗方法^[5]：外科手术、栓塞、栓塞联合外科手术或支架置入，治疗方式的选择主要是根据病灶的位置和大小。血管内介入栓塞治疗较常用，它能够即时止血，是控制血管畸形引起中



①②③:CTA 显示支气管动脉近端瘤样突出;④DSA 造影示近端动脉瘤;⑤⑥对远端及瘤腔进行栓塞,复行 DSA;⑦⑧⑨栓塞术后复查,术区见放射状高密度影,纵隔血肿吸收

图 1 支气管动脉 CTA 及纵隔型支气管动脉瘤弹簧圈栓塞治疗前后

度或大量咯血的有效手段,同时也能够有效隔绝瘤腔^[6]。如何选择材料也是该项技术的一个重点,常用的栓塞材料包括弹簧圈、PVA 颗粒及覆膜支架等。关于支气管动脉瘤或假性动脉瘤的介入治疗方法分为以下几种情况:①当动脉瘤或假性动脉瘤囊位于近端支气管动脉时,瘤颈小可用金属线圈或液体栓塞剂填塞动脉瘤或假性动脉瘤囊;瘤颈宽、瘤腔大时则会导致线圈移位、非靶向栓塞风险及术后侧支循环形成,因此主要应用弹簧圈联合覆膜支架进行栓塞/隔绝^[7-9]。但也有研究报道置入覆膜支架会有空气栓塞、增加脊髓缺血等风险,故对于此类支气管动脉瘤,有研究仅用可控弹簧圈进行栓塞^[10-12]。②动脉瘤附近支气管动脉有足够的长度,完全栓塞动脉瘤或假性动脉瘤囊的远端和近端分支动脉是常用的隔离栓塞技术,常选择使用线圈、生物胶(氰基丙烯酸酯正丁酯)等进行栓塞^[13-14]。③当出现流入动脉迂曲难以插管、动脉瘤组成复杂、栓塞后复发时,可以考虑手术治疗^[15]。本文报道了 1 例典型的纵隔内支气管动脉瘤破裂的案例,病灶距离降主动脉约 2.4 cm,我们应用弹簧圈栓塞瘤腔及流出端支气管动脉,因为有研究认为应同时栓塞流出动脉,避免动脉瘤出现逆行血流而导致破裂^[10,16]。

对于支气管动脉瘤或假性动脉瘤的治疗目前均是个案报道,没有明确的指南。血管内介入治疗具有安全、微创、高效等特点,是目前用于支气管动脉瘤及假性动脉瘤最常见的治疗方法。然而,血管内治疗的成功与否取决于操作者隔离动脉瘤的能力,栓塞材料及栓塞方式选择不恰当会导致动脉瘤复发。本文报道的这 1 例支气管动脉瘤破裂的病例,随访 1 年,经导管动脉栓塞术成功治疗,今后会继续随访观察其疗效。

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