

·综述 General review·

股总动脉闭塞性病变治疗现状

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【摘要】 股总动脉闭塞性病变发病率低,但可伴发明显的跛行和重度肢体缺血。目前,内膜剥脱术仍为首选治疗。然而外科手术有高达 15%围手术期死亡/并发症发生率。股总动脉病变腔内治疗,如普通球囊血管成形(POBA)、支架植入、药物涂层球囊(DCB)、定向旋切(DA)等临床应用报道有不少,各种腔内治疗手段均有不错的近期临床疗效和极低并发症发生率。虽然迄今仅有 2 项外科手术对照腔内治疗的随机试验研究提示近期和远期结果,但更多大宗临床随机对照试验研究验证腔内治疗的有效性仍值得期待。

【关键词】 股总动脉;闭塞性病变;内膜剥脱术;支架;定向旋切

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【Abstract】 Clinically, the common femoral artery (CFA) occlusive diseases can be accompanied by obvious claudication and severe limb ischemia, although its incidence is low. At present, endarterectomy has still been the preferred treatment. However, the perioperative mortality and complication rate of surgery is up to 15% high. The endovascular treatment methods for CFA occlusive diseases include plain old balloon angioplasty (POBA), stent implantation, drug-coated balloon (DCB), directional atherectomy (DA), etc. There have been many reports about their clinical applications, the results of these studies have shown that these treatment methods have satisfactory short-term curative efficacy with very low incidence of complications. So far, there are only two randomized trial studies that have been reported, in which the short-term and long-term outcomes of endovascular therapy have been compared with those of surgical treatment. Anyway, large number, large sample clinical randomized controlled trial studies need to be conducted before the curative efficacy of endovascular therapy can be clarified. (J Intervent Radiol, 2021, 30: 739-742)

【Key words】 common femoral artery; occlusive disease; endarterectomy; stent; directional atherectomy

随着腔内技术和器械发展,越来越多下肢动脉缺血性疾病患者选择腔内处理^[1]。虽然腔内治疗适应证不断拓宽,但股总动脉闭塞性病变处理仍以外科内膜剥脱为首选治疗^[2],以往一些研究也已证实内膜剥脱术的安全性和有效性^[3-5]。股总动脉病变多为弥漫且偏心性严重钙化病变,腔内治疗往往难以获得很好效果^[6]。同时,由于股总动脉邻近于髋关节,关节活动导致股总动脉时刻承受扭曲、拉伸等

力的作用,一般金属裸支架会面临较高的断裂和闭塞风险,而股总动脉是动脉性疾病腔内治疗常用入路,一旦植入传统开环支架,将会给未来腔内治疗带来极大麻烦^[7-8]。本文旨在汇总国际上关于股总动脉病变治疗方面有代表性的一些研究,重点阐述股总动脉病变腔内治疗现状,包括外科手术,腔内治疗如普通球囊血管成形(plain old balloon angioplasty, POBA)、支架植入、药物涂层球囊(drug-coated

balloon, DCB)、定向旋切 (directional atherectomy, DA) 等单纯治疗或联合治疗。

1 股总动脉病变临床分型

Azema 等^[9]报道将股总动脉闭塞性病变分为 4

型, I 型为病变自髂外动脉远端延伸至股总动脉, 未累及分叉; II 型为病变仅位于股总动脉, 未累及分叉; III 型为病变位于股总动脉同时累及分叉; IV 型为病变位于股总动脉的人工血管吻合口部(图 1)。此种分型被许多学者所接受, 随后一些研究继续沿用这一分型。

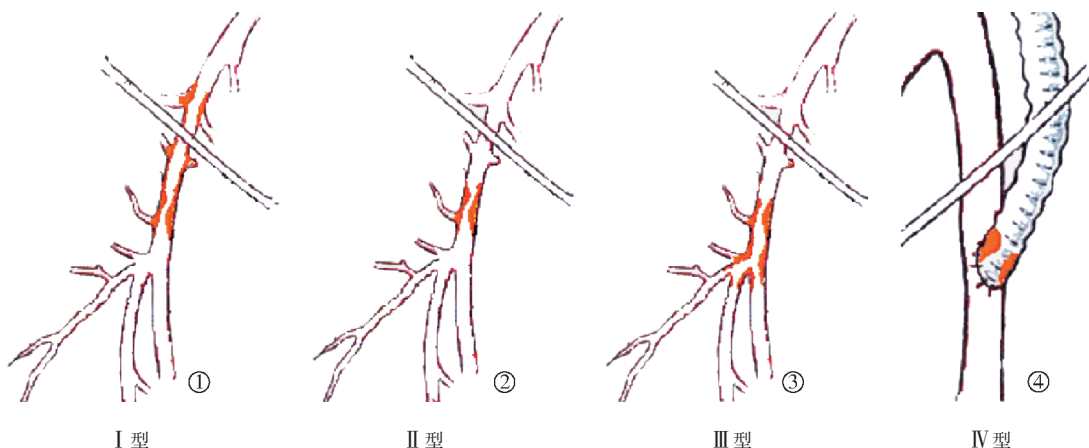


图 1 股总动脉闭塞分型

2 外科手术

虽然一些指南推荐内膜剥脱及补片成形术为股总动脉病变治疗首选^[2], 但是目前临床证据并不足以支持外科手术作为股总动脉病变标准治疗选择, 同时一些研究还显示外科术后并发症多且发生率偏高, 主要并发症有二次手术、输血、切口的感染等^[3-4, 10-12], 其中切口血清肿和浅层感染率可高达 20%^[10-11]。

TECCO 注册研究^[12]是目前唯一发表的关于股总动脉病变外科手术和支架治疗两种治疗方法前瞻性随机对照研究。TECCO 研究显示外科手术术后 30 d 内死亡率达 26%, 而支架组仅为 12.5%, 同时外科手术组还有高达 16.4% 手术切口延期愈合率。TECCO 注册研究结果: 外科手术组与支架组随访 24 个月时一期通畅率和免于靶血管再干预率差异无统计学意义。然而该研究纳入患者数少, 且临床主要终点事件关联术后 30 d 死亡率和并发症发生率, 因此结果公布后引起了不少学者质疑。

3 POBA

文献报道股总动脉病变单纯 POBA 术后 12 个月一期通畅率为 59%~88%^[13-19]。然而远期一期通畅率有限, 如 Mehta 等^[14]报道 4 年一期通畅率为 66%, Dattilo 等^[20]报道 5 年一期通畅率为 60%。所有这些研究中补救支架率高达 37%。如此高的支架补救率, 主要还是由于股总动脉严重偏心性钙化需要

高压扩张导致了局限性夹层。

4 经皮支架成形术

Bath 等^[21]集合分析关于股总动脉病变腔内治疗文献, 共纳入 20 篇 897 处病变, 其中 68.8% 患者为单纯球囊扩张, 22.3% 支架植入, 所有患者术后 12、24 个月一期通畅率分别为 77%、73%, 亚组分析发现其中 50 例直接植入支架患者术后 12 个月一期通畅率可达 89%。Nasr 等^[22]研究报道股总动脉支架 5 年一期通畅率为 72.5%。关于支架断裂情况研究仅见 Thiney 等^[23]报道, 53 例股总动脉病变支架术后 2 年随访仅发现 4 例 (7.5%) 支架断裂, 其中 2 例为 II 型断裂, 1 例 III 型断裂, 1 例 IV 型断裂。

Baumann 等^[24]研究认为股总动脉在结构上与股浅动脉存在差异, 其管壁弹性更适于支架植入, 更类似髂动脉结构。基于此点, 新一代仿生支架 Supera (编制的开环支架) 被应用于股总动脉, 相应 VMI-CFA 注册研究^[25]已获得更好的临床结果, 46 例 Azema II 型、42 例 III 型病变患者 Supera 支架植入术后 12 个月一期通畅率分别为 95.3%、95.1%, 免于靶血管干预率分别为 97.9%、97.7%。

5 DCB

目前仅有 Stavroulakis 等^[26]单中心回顾性研究提示, DCB 应用于股总动脉病变术后 12 个月一期通畅率为 68%, 免于靶血管干预率为 75%。Cantu 等^[27]

回顾性分析 2 个中心 154 例股总动脉腔内治疗患者,DCB 组对比 POBA 组术后 24 个月免于靶血管干预率分别为 75.7%和 86.8%。可见,DCB 在股总动脉病变并未显效于 POBA。分析原因,可能如 Davaine 等^[28]研究所述,股总动脉狭窄/闭塞性病变多钙化较重,甚至内膜伴有骨样化生,导致紫杉醇无法渗透并发挥作用。

6 DA 辅助其他治疗

Guo 等^[29]对比 DA 和 POBA 治疗股总动脉狭窄病变,4 年一期通畅率分别为 87.1%和 66.7%。Stavroulakis 等^[26]报道 DA 结合 DCB 治疗股总动脉病变后 12 个月一期通畅率为 88%,免于靶血管干预率为 89%。Cioppa 等^[30]报道 DA 结合 DCB 治疗股总动脉病变后 12 个月二期通畅率为 96.7%。但股总动脉 DA 治疗有一定的并发症。Picazo 等^[31]报道 25 例连续治疗患者中有 2 例出现假性动脉瘤,1 例动脉穿孔。不论如何,对比支架植入的临床研究,DA 结合 DCB 治疗整体非劣性结果可能更易被临床医师和患者所接受,毕竟术后病变股总动脉再次处理及穿刺应用不受限。

7 其他腔内新处理手段

Linni 等^[32]报道一项生物可吸收支架治疗股总动脉病变随机对照试验研究,结果显示生物可吸收支架 12 个月一期通畅率为 80%,其中有 6 例支架因局部钙化较重无法获得有效管腔。这进一步证实股总动脉病变的钙化较重。震波球囊是一种利用声波破坏局部钙化的新型球囊装置。Brodmann 等^[33]率先报道 DISRUPT PAD I、II 临床试验研究的部分结果,震波球囊在股总动脉严重钙化病变中可获得较好管腔,但震波球囊须结合其他治疗手段(如刻痕球囊、DCB、DA 等),目前尚无大宗临床试验研究完成。

8 正在进行的相关临床试验研究

PESTO-CFA 研究(NCT02517827)是一组纳入 306 例股总动脉病变、对比内膜剥脱术和 DA 结合 DCB 治疗后 24 个月临床随访结果的随机对照研究。Garcia 主持的另一项 DA 结合 DCB 或 POBA 对比内膜剥脱术或补片术随访 12 个月的临床试验研究也正在进行中。

9 结语

股总动脉闭塞性病变由于多为弥漫性、偏心

性、严重钙化病变,指南中仍推荐外科内膜剥脱术为首选治疗。但其围手术期并发症较多,且发生率较高。腔内治疗可作为一种安全、有效的选择。DA 结合 DCB 虽无大宗临床病例数据支持,但可作为比较合理的治疗组合手段予以推荐。如果单纯 POBA 可获得满意的临床影像学结果,不推荐 DCB 和支架植入;一旦出现限流夹层和>30%狭窄需要支架植入,推荐选择 Supera 支架。相信随着新器械和技术发展,未来可能会出现更好的腔内治疗方案。

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