

·临床研究 Clinical research·

双侧股静脉入路在左下肢深静脉血栓介入治疗中的应用

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【摘要】 目的 探讨采用双侧股静脉入路介入插管溶栓方法治疗左下肢深静脉血栓的可行性。**方法** 对 18 例从右股静脉或右颈静脉入路行左髂股静脉插管失败的急性左下肢深静脉血栓患者, 采用左侧股静脉顺行法穿刺, 注射对比剂证实穿刺成功后将导丝插入至下腔静脉, 将导丝从右侧股静脉或颈静脉穿出或拉出后建立导丝轨道, 再沿导丝将导管自右向左逆行插入左侧髂股静脉留置溶栓。**结果** 18 例左股静脉穿刺 16 例获得成功, 建立了左右股静脉导丝轨道, 并顺利将导管自右股静脉或颈静脉插入左侧髂股静脉内; 经过 3 ~ 14 d 导管溶栓后血栓均完全溶解, 下肢肿胀消退; 在溶栓过程中左侧股静脉穿刺处无明显淤血和血肿发生。**结论** 对于经右股静脉或右颈静脉入路插管失败的左下肢深静脉血栓形成者, 采用双侧股静脉入路建立导丝轨道后再插管的方法, 成功率高、安全、创伤小, 临床应用可行。

【关键词】 双侧股静脉; 入路; 左下肢; 深静脉血栓; 介入治疗

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【Abstract】 Objective To investigate the feasibility of interventional catheterization with bilateral femoral vein approaches for performing the thrombolytic treatment of acute deep venous thrombosis of left lower extremity. **Methods** Antegrade puncturing into the left femoral vein was carried out in eighteen patients with acute deep vein thrombosis in the left lower extremity after left iliac-femoral vein catheterization via the right femoral vein or the right jugular vein access failed. When the puncturing of the left femoral vein was successfully done and was confirmed by angiography, the guide wire was inserted into the inferior vena cava and was pulled out through the right femoral vein or right jugular vein, and a wire track was thus established. Then, retrograde insertion of the catheter was conducted along the wire from the right to the left until the catheter was placed into the left iliac-femoral vein for thrombolysis. **Results** Of 18 cases, successful puncturing into the left femoral vein was achieved in 16, and an effective wire track was established between the left and right femoral veins, based on which the catheter was smoothly inserted into the left iliac-femoral vein via the right femoral vein or jugular vein. Catheter thrombolysis was employed for 3 to 14 days, the thrombus was completely dissolved and the lower extremity swelling subsided. During the course of thrombolysis, no obvious congestion or hematoma occurred at the puncturing site of the left femoral vein. **Conclusion** For patients with deep vein thrombosis of left lower extremity, when left iliac-femoral vein catheterization via the right femoral vein or the right jugular vein access failed, the establishment of wire track by using bilateral femoral vein approaches for further catheterization of left iliac-femoral vein and subsequent thrombolysis is feasible in clinical practice. This technique is safe and minimally-invasive with higher success rate. (J Intervent Radiol, 2011, 20: 48-51)

【Key words】 femoral vein, bilateral; approach; left lower extremity; deep venous thrombosis; interventional therapy

下肢深静脉血栓(deep venous thrombosis, DVT)

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是下肢常见的静脉血管阻塞性疾病。近年来, 采用介入导管溶栓(catheter directed thrombolysis, CDT)治疗, 显示出良好的治疗效果, 临床应用日益广泛

并多取得成功^[1]。DVT 的 CDT 治疗通常是采用经健侧股静脉或颈静脉入路的逆行插管途径,以及经患侧腘静脉或大小隐静脉入路的顺行插管途径。我院从 2004 年 3 月-2009 年 10 月,共对 115 例下肢 DVT 进行 CDT 治疗,插管失败 18 例,均为左下肢 DVT 患者。对该 18 例患者尝试采用直接经左侧股静脉穿刺的方法,注射对比剂证实后将导丝插入下腔静脉,再从右侧股静脉或颈静脉拉出或穿出建立导丝轨道,再沿导丝自右向左将导管插入左侧髂股静脉留置溶栓,结果 16 例穿刺插管获得成功,取得了良好的治疗效果,现介绍如下。

1 材料与方法

1.1 一般资料

自 2004 年 3 月-2009 年 10 月,采用经右侧股静脉或(和)颈静脉入路,CDT 治疗左下肢 DVT 时插管失败 18 例,其中男 7 例,女 11 例;年龄 35 ~ 66 岁,平均(44 ± 5)岁;病程 1 ~ 14 d(平均 4.7 d)。临床均表现为左下肢中 ~ 重度肿胀和静脉淤血征像;其中 10 例有外伤或手术史,8 例无明确诱因;18 例患者介入插管前均经彩色多普勒超声证实为左髂股静脉不全性阻塞。

1.2 治疗方法

先经右侧股静脉穿刺,置入 5 F 导管鞘,引入 5 F 猪尾巴导管行下腔静脉造影以观察下腔静脉及双

侧髂静脉开口有无血栓;引入 5 F Cobra 或 SIM 导管探查左侧髂总静脉和髂外静脉,对于探查失败或导管插入失败者,将导丝引入右侧颈内静脉作为标志,行颈静脉穿刺插入 5 F 单弯导管再次对左侧髂总和髂外静脉探查和插管。反复尝试仍不能成功者,则行左侧股静脉直接穿刺,抽出少许静脉血或血栓后注射少量对比剂,证实穿刺针位于股静脉内,插入 0.035 英寸导丝,引入 5 F 血管鞘,再次注入少量对比剂证实位于股静脉后,使用超滑导丝探查髂外和髂总静脉直至导丝进入下腔静脉。然后换入交换加强导丝从右侧股静脉或颈静脉血管鞘穿出或引入抓捕器将导丝拉出,建立导丝轨道,再将导管自右股静脉或颈静脉插入左髂股静脉造影并留置(图 1)。左侧穿刺处加压包扎 12 h 或用沙袋压迫 4 h 后即可进行导管溶栓治疗。尿激酶每日 80 万 u,分 4 次经导管间歇推注。溶栓过程中采用低分子肝素 5 000 u 皮下注射,2 次/d 抗凝治疗。溶栓治疗 48 ~ 72 h 复查造影观察血栓溶解情况,及时调整溶栓导管位置和尿激酶用量。对伴有髂总静脉严重狭窄者,3 例溶栓结束后还辅以球囊扩张。全部病例溶栓结束后继续口服华法林进行抗凝治疗。4 例被置入下腔静脉临时滤器。

2 结果

本组 18 例患者中 6 例为探查左侧髂总静脉失

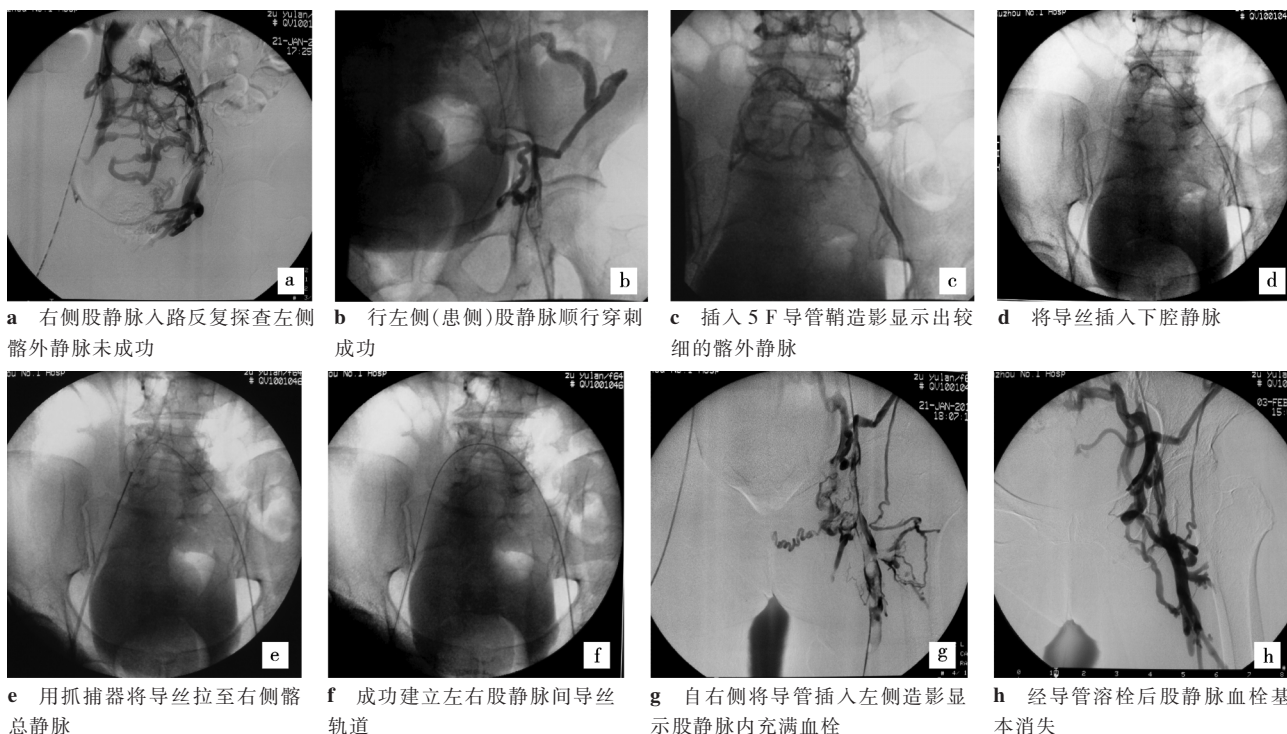


图 1 左下肢 DVT 导管溶栓过程

败,其中发生血管损伤穿孔 3 例;3 例为探查髂外静脉失败;9 例为导管无法插入髂股静脉。该 18 例患者改从左侧(患侧)股静脉穿刺入路后 16 例获得成功,其中 1 例穿刺插入导丝后形成夹层再次穿刺进入股静脉真腔。2 例反复穿刺不成功改从足背静脉加压推注溶栓。穿刺插管成功的 16 例患者经 DSA 造影发现髂股静脉内均充满新鲜血栓,大部分髂内静脉和侧支静脉内也充满血栓,其中 11 例合并髂总静脉起始段重度狭窄,4 例髂总静脉内合并大块陈旧血栓,3 例合并髂外静脉明显狭窄;经 3 ~ 14 d 导管接触性溶栓后,下肢肿胀全部消除,DSA 造影显示新鲜血栓完全或大部分被溶解(图 1);溶栓过程中未发生肺血管栓塞病例。左股静脉穿刺处未发生明显皮下淤血和血肿。随访 1 ~ 48 个月,18 例中 12 例完全恢复正常,4 例留有活动后轻度下肢肿胀,2 例穿刺插管未成功从足背静脉注射者留有中度下肢肿胀。

3 讨论

下肢 DVT 是下肢较常见的静脉血管阻塞性疾病,近年来发病率有逐年上升趋势,据报道发病率达 7% ~ 58%^[2,3]。近年来,采用 CDT 治疗,显示出良好的治疗效果。2008 年 ACCP 指南中对于急性 DVT (≤ 7 d)已推荐采用 CDT 治疗,对于髂股静脉近端的广泛的 DVT (≤ 14 d)者,CDT 治疗能减少血栓后综合征的发生^[4,5]。

CDT 治疗导管插入血栓的途径有经健侧股静脉或颈静脉的逆行插管方法,也有经患侧腘静脉或大小隐静的顺行法。介入科医师根据其习惯和对技术掌握的熟练程度进行选择。由于下肢 DVT 多见于左下肢,据报道是右侧的 2 ~ 8 倍^[6-7],这与左侧髂静脉狭窄、闭塞(即 Cockett 综合征)或解剖变异密切相关,也是造成左髂股静脉插管比较困难的原因之一^[8]。我院对经健侧经股静脉或颈静脉的逆行插管失败的 18 例患者,尝试采用直接经患侧股静脉穿刺,建立左右导丝轨道后再自右向左插管的方法,16 例取得成功,未出现并发症,技术上可行。

3.1 患侧(左侧)股静脉穿刺

股静脉的成功穿刺是进行髂静脉探查的前提,但由于患侧股静脉内存在血栓,穿刺针进入股静脉腔也多不会像正常股静脉穿刺那样能非常顺畅地抽到静脉血;技术上穿刺点、穿刺方向和穿刺深度的选择同正常股静脉穿刺相同,当抽出比正常静脉血更暗红的微量血或血栓时,提示穿刺针已穿入股

静脉,固定穿刺针注射 2 ml 稀释对比剂,证实穿刺针位于股静脉内后插入导丝;导丝行走方向正确,患者无任何疼痛感,说明导丝可能位于股静脉真腔中,引入 5 F 血管鞘再次造影进行证实。

3.2 探查髂静脉

从患侧股静脉顺行探查髂静脉比较容易,但由于左侧髂静脉狭窄、闭塞、畸形以及伴随的侧支血管等解剖因素,探查时应耐心细致防止导丝穿破血管或进入到侧支静脉血管内。先用 0.035 英寸超滑软泥鳅导丝探查,边探查边造影确保导丝位于髂股静脉真腔或主干内,直至导丝能探入下腔静脉,将 5 F 导管引入后再交换入 0.035 英寸加硬导丝。

3.3 建立导丝轨道

股静脉的穿刺成功和髂静脉的成功探查是建立导丝轨道的前提,只需调整从左侧插入的单弯或 Cobra 导管方向,将导丝从右侧股静脉或颈静脉鞘管内穿出,使用抓捕器就能更容易将导丝拉出,建立左股静脉-右股静脉或左股静脉-右颈静脉间的导丝轨道。

3.4 置入导管溶栓

导丝轨道建立后,从右向左插入溶栓导管就变得非常容易。当导管插至左侧股静脉穿刺处时,即可撤除导丝轨道,再沿导丝插入溶栓导管,进一步造影或探查股静脉,决定溶栓导管放置位置。

3.5 左股穿刺处处理

溶栓导管置入后准备即刻进行溶栓治疗者,穿刺处加压包扎 12 h 或使用沙袋压迫 4 h 即可;如果次日溶栓,穿刺处压迫 10 min 即可。本组病例穿刺插管和溶栓治疗中未发生明显皮下淤血和血肿,说明操作非常安全。

[参考文献]

- [1] Baldwin ZK, Comerota AJ, Schwartz LB, et al. Catheter-directed thrombolysis for deep venous thrombosis [J]. Vasc Endovasc Surg, 2004, 38: 1 - 9.
- [2] Knudson MM, Ikossi DG, Khaw L, et al. Thromboembolism after trauma an analysis of 1602 episodes from the American College of Surgeons National Trauma Data Bank [J]. Ann Surg, 2004, 240: 490 - 496.
- [3] Qaseem A, Snow V, Barry P, et al. Current diagnosis of venous thromboembolism in primary care: a clinical practice guideline from the American Academy of Family Physicians [J]. Ann Fam Med, 2007, 5: 57 - 62.
- [4] Sobel M, Verhaeghe R. Antithrombotic therapy for peripheral artery occlusive disease: American College of Chest Physicians

- Evidence-Based Clinical Practice Guidelines (8th Edition)[J]. Chest(6 supp 1), 2008, 133: 815S - 843S.
- [5] Kearon C, Kahn SR, Agnelli G, et al. American College of Chest Physicians Antithrombotic therapy for venous thromboembolic disease: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines(8th Edition). [J]. Chest, 2008, 134: 892.
- [6] 顾建平, 何旭, 楼文胜, 等. 介入治疗 576 例下肢深静脉血栓形成[J]. 南京医科大学学报(自然科学版), 2006, 26: 1261 - 1264.
- [7] 楼文胜, 顾建平, 何旭, 等. 髂静脉压迫综合征与单侧下肢肿胀[J]. 介入放射学杂志, 2008, 17: 22 - 25.
- [8] 花迎雪, 乔德林, 程永德, 等. 髂静脉压迫综合征影像学诊断与介入治疗[J]. 介入放射学杂志, 2006, 15: 396 - 398.
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·临床研究 Clinical research·

局部动脉灌注治疗雷诺病 37 例

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【摘要】目的 观察局部动脉灌注治疗雷诺病的疗效。**方法** 自 2005 年 3 月至 2010 年 1 月应用局部动脉灌注方法治疗 37 例内科治疗无效的雷诺病患者。患者病史 6 个月 ~ 5 年, 平均 (38.3 ± 2.7) 个月; 均以双手发病为主。应用 Seldinger 技术经股动脉将导管置入肱动脉远端或桡动脉, 每侧各推注罂粟碱 30 mg、尿激酶 10 万 u、利血平 0.5 mg、前列地尔 10 μ g。**结果** 所有 37 例患者都成功置管和灌注, 灌注后双手动脉供血情况立即明显改善。其中 18 例患者术后完全缓解, 随访 9 个月 ~ 4 年未复发; 6 例患者 1 个月 ~ 2 年后复发, 行第 2 次动脉灌注治疗, 随访 1 ~ 3 年未复发。2 例患者效果不明显, 经 2 次动脉灌注治疗, 都在治疗数天后原来症状复发。11 例患者随访 3 ~ 6 个月后失随访, 随访期间没有复发。37 例患者平均随访 (16.6 ± 4.6) 个月, 所有病例均未出现穿刺部位和肢体并发症。**结论** 局部动脉灌注治疗内科治疗无效的雷诺病安全、有效。

【关键词】 雷诺病; 动脉灌注治疗; 腔内治疗

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Regional intra-arterial infusion for the treatment of Raynaud's disease: a therapeutic analysis of 37 cases LI Zhao-hui, XU Yi-ming, YANG Dong-hai, LIU Qing. Department of Vascular Surgery, Zhongshan Hospital, Xiamen University, Xiamen 360014, China

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【Abstract】Objective To assess the effectiveness of regional intra-arterial infusion in treating Raynaud's disease. **Methods** From March 2005 to January 2010, regional intra-arterial infusion was carried out in 37 patients with Raynaud's disease who had failed to response to internal medication. The patients included 14 males and 23 females with a mean age of 23.4 years (17 - 26 years). The course of disease was 6 months to 5 years, with a mean course of (38.3 ± 2.7) months. Both hands were involved when the disease developed. By using Seldinger technique the catheter was inserted into the distal site of brachial artery, or into the radial artery, which was followed by arterial infusion of Nicorandil (30 mg), Urokinase (100 000u), Reserpine (0.5 mg) and LipoPGE1 (10 ug) for both sides. The clinical results and complications were observed and analyzed. All the patients were followed up for (16 ± 4.6) months. **Results** The technical success, including catheterization and arterial infusion, was achieved in all 37 patients. After the treatment the blood supply of both hands was remarkably and immediately improved. Of 37 patients, complete relief of ischemic symptoms was seen in 18 with no recurrence during the follow-up period (9 months to 4 years). Recurrence developed in 6 patients within one month to 2 years after the therapy, arterial infusion was employed again and the patients showed no recurrent symptoms in follow-up time of 1-3 years. Eleven

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