

- radial arterial blood pressures during sevoflurane anaesthesia: A self-control study in patients undergoing neurosurgery. Eur J Anaesthesiol, 2016, 33 (2): 110-117.
- [9] Lopes MR, Oliveira MA, Pereira VO, et al. Goal-directed fluid management based on pulse pressure variation monitoring during high-risk surgery: a pilot randomized controlled trial. Crit Care, 2007, 11 (5): R100.
- [10] 冯鲲鹏, 冯雪辛, 王天龙, 等. 脉压变异度和每搏量变异度用于神经外科手术容量监测相关性的研究. 北京医学, 2013, 35 (11): 939-941.
- [11] Sundaram SC, Salins SR, Kumar AN, et al. Intra-operative fluid management in adult neurosurgical patients undergoing intracranial tumour surgery: randomised control trial comparing pulse pressure variance (PPV) and central venous pressure (CVP). J Clin Diagn Res, 2016, 10(5): UC01-5.
- [12] Salzwedel C, Puig J, Carstens A, et al. Perioperative goal-directed hemodynamic therapy based on radial arterial pulse pressure variation and continuous cardiac index trending reduces postoperative complications after major abdominal surgery: a multi-center, prospective, randomized study. Crit Care, 2013, 17 (5): R191.
- [13] Yang X, Du B. Does pulse pressure variation predict fluid responsiveness in critically ill patients? A systematic review and meta-analysis. Crit Care, 2014, 27, 18 (6): 650.

(收稿日期: 2017-01-15)

· 病例报道 ·

股静脉穿刺导丝在股静脉分支打结一例

赵丽 尉静芳 马汉祥

患者,女,58岁,因“突发意识不清7h”入院。诊断为自发性脑出血破入脑室,高血压病(3级,极高危)行保守治疗;入院后2d,因坠积性肺炎、肺部感染行气管切开术,患者需静脉营养,行深静脉置管。患者仰卧,臀部稍垫高,右膝关节微屈,髋关节伸直并稍外展外旋,常规消毒,在腹股沟韧带下方2~3cm,股动脉内侧与皮肤成30~45°进针,穿刺针穿刺回血后,置入导丝,置入时遇到阻力,退出后导丝前端变形。导丝前端塑形后再次尝试穿刺置管仍未成功。选择左侧股静脉穿刺置管术,常规消毒铺巾后,定位、穿刺方法同前,穿刺回血后,置入导丝,导丝置入20cm后略有阻力,随即退出穿刺针,置入中心静脉导管,退出导丝时遇阻力,导丝无法顺利退出,考虑导丝打结可能,未强行退出,急行血管造影,造影结果提示导丝由左侧股静脉进入腰升静脉后打结,血管外科医师置入血管扩张器解开打结导丝,顺利取出导丝。

讨论 该患者试穿及穿刺针穿刺时均有通畅回血,但导丝置入20cm后略有阻力,血管造影发现导丝在腰升静脉较细处打结,导丝取出后再次行血管造影,提示该患者左侧股静脉主干变曲,而腰升静脉较平直,所以在置入导丝时,容易进入分支血管,而分支血管较细且导丝前端因变形而塑形,可能导致导丝在分支血管内打结不易退出。

有临床研究指出,女性患者的股静脉解剖变异较男性大, Schnyder等^[1]研究表明女性患者股静脉直径较男性小,股静脉穿刺成功的难度增大。Schummer等^[2]进行的1794例中心静脉穿刺置管术的回顾性研究也表明女性穿刺失败

率明显高于男性。且有临床研究显示,女性股静脉位于股动脉内下方的比例明显高于男性,即女性的股静脉与股动脉间解剖关系变异较大,动脉覆盖静脉情况增加。因此女性患者行股静脉穿刺时导丝误入分支血管及损伤动脉的可能性大于男性^[3]。

综上所述,在行深静脉穿刺置管时,当导丝或导管置入或拔出遇到阻力时,不可盲目暴力拔出,应及时借助影像学检查,如超声、血管造影等,明确导丝或导管的位置及形态,透视下仍无法取出导丝时,可在局麻下行静脉切开术取出导丝或导管。如有导丝断裂,需进一步检查残端位置并及时请相关科室进行会诊并处理。

参 考 文 献

- [1] Schnyder G, Sawhney N, Whisenant B, et al. Common femoral artery anatomy is influenced by demographics and comorbidity: implications for cardiac and peripheral invasive studies. Catheter Cardiovasc Interv, 2001, 53(3):289-295.
- [2] Schummer W, Schummer C, Rose N, et al. Mechanical complications and malpositions of central venous cannulations by experienced operators. A prospective study of 1794 catheterizations in critically ill patients. Intensive Care Med, 2007, 33 (6): 1055-1059.
- [3] 陆利冲, 汪小梅, 李浩, 等. 超声下股静脉与股动脉间解剖关系及其影响因素的研究. 临床麻醉学杂志, 2011, 27 (9): 851-853.

(收稿日期: 2017-02-08)