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脾动脉栓塞术后出现严重粘连的脾切除手术体会 *

余灵祥 张绍庚 郭晓东 肖朝辉 赵德希 孙佳轶 张培瑞 李志伟[△]
(解放军第 302 医院 北京 100039)

摘要 目的:探讨脾动脉栓塞术后严重脾粘连脾切除手术技巧,为临床实践提供可借鉴的方法。**方法:**收集我院 2005 年 4 月 -2013 年 6 月收治的 18 例脾动脉栓塞术后严重脾粘连行脾切除术的患者临床资料,分析手术时间、术中出血、术中特殊处理及术后恢复情况等。**结果:**18 例患者均顺利恢复出院,无围手术期死亡,开腹后到脾切除完成平均耗时 55 min、出血 550 mL。术后并发症为腹水(8 例)、肺部感染(1 例)、胰瘘(1 例)及腹腔内出血(1 例)。**结论:**脾动脉栓塞术后出现严重脾粘连行脾切除术,手术风险较大,手术时间、术中出血较常规脾切除术明显延长、增多。规范手术操作,细致分离脾周粘连,合理处理脾蒂,是安全、有效完成此类脾切除术的关键。

关键词:脾动脉栓塞术;严重脾粘连;脾切除术

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Experience of Splenectomy in Severe Adhesions after Splenic Artery Embolization*

YU Ling-xiang, ZHANG Shao-geng, GUO Xiao-dong, XIAO Chao-hui, ZHAO De-xi, SUN Jia-yi, ZHANG Pei-rui, LI Zhi-wei[△]
(302 Hospital of PLA, Beijing, 100039, China)

ABSTRACT Objective: To explore the splenectomy surgical techniques in severe adhesions spleen after splenic artery embolization. **Methods:** A retrospective analysis about the clinical data of 18 patients who were applied the splenectomy surgery with severe adhesions by the splenic artery embolization in our hospital from April 2005 to June 2013 were conducted. Then the operation time, the blood loss, the intraoperative special treatment and the postoperative recovery were analyzed. **Results:** 18 cases were all successfully recovered and discharged without death. The average operation time was 55min and blood loss 550 mL. Postoperative complications were ascites (8 cases), lung infection (one case), pancreatic fistula (one case) and intraperitoneal hemorrhage (one case). **Conclusions:** Compared with conventional splenectomy, the surgical risk of splenectomy in severe adhesions after splenic artery embolization increased, the operation time prolonged and blood loss increased. The key to safe and effective surgery is normalized operation procedures, meticulous separation of spleen adhesions and rational treatment of spleen pedicle.

Key words: Splenic artery embolization; Severe adhesions spleen; Splenectomy

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前言

近年来,随着介入技术的发展与日益成熟,脾动脉栓塞术越来越多地应用于临床治疗门静脉高压症合并脾肿大、脾功能亢进。脾动脉栓塞术手术过程简单、快捷,局麻下就可完成,由于保留部分脾脏从而保存了脾脏的生理功能^[1,2]。1973 年 Maddison 首次应用脾动脉栓塞术治疗脾功能亢进,获得较好的临床效果,近年来国内外相继报道脾动脉栓塞术治疗脾功能亢进等的临床效果^[3-5]。然而,行脾动脉栓塞术后,部分患者因食管静脉曲张破裂出血需要外科手术治疗,而脾动脉栓塞术后造成广泛性脾周粘连,同时有丰富的侧枝循环,使术中脾脏游离变的十分困难,严重的脾粘连给下一步的脾切除术带来一定的

挑战^[6]。我们对 2005 年 4 月 -2013 年 6 月我院收治的 18 例脾动脉栓塞术后的患者行脾切除手术,回顾总结临床资料,对术中出现的难点、术后出现的并发症情况进行分析,报道如下:

1 资料和方法

1.1 一般资料

选取我院 2005 年 4 月 -2013 年 6 月收治的 18 例脾动脉栓塞术后行脾切除手术患者的临床资料。其中男 15 例,女 3 例,年龄 24-65 岁,平均年龄 51.4 岁。乙型肝炎肝硬化 14 例,丙型肝炎肝硬化 3 例,酒精性肝硬化 1 例。术前均行脾动脉栓塞治疗,其中 12 例在栓塞术后出现发热,时间超过 1 月,有 1-3 次不等食管胃底静脉曲张破裂出血史,胃镜提示食道胃底静脉

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作者简介:余灵祥(1976-),主治医师,研究方向:肝病外科诊断与手术治疗

△通讯作者:李志伟,主任医师,主要从事肝癌门脉高压、肝移植的临床及基础研究,

E-mail: laohushanshang@163.com

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曲张为中-重度,红色征(+-+--++)。肝功能 Child-pugh A 级 16

例,B 级 2 例。

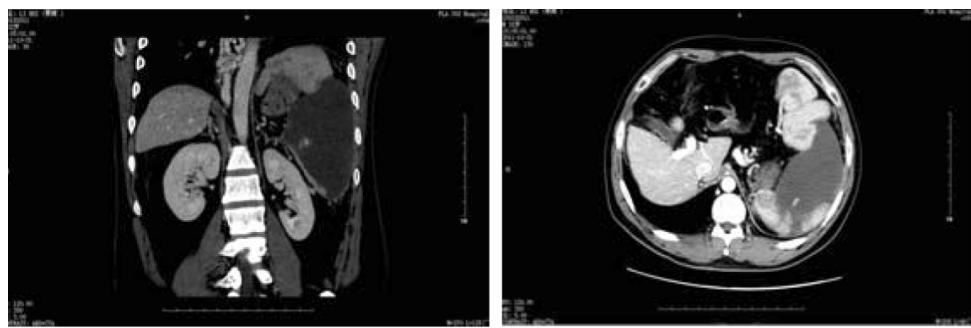


图 1 脾切除术后典型的梗死

Fig.1 Typical infarction after the splenectomy

1.2 操作方法

病人在全身麻醉状态下采取仰卧位,左腹直肌 18-25 cm 长切口。自胃网膜右经脉与胃网膜左经脉之间无血管区向胃底打开胃大弯及部分胃后组织,此时能在胰腺上缘触到脾动脉搏动,在脾动脉鞘内分离出脾动脉,双 7# 线结扎或生物夹夹闭脾动脉(15 例分离后结扎或生物夹夹闭,3 例脾动脉搏动不明显以 3-Proline 缝扎),然后逐步游离粘连带和脾周韧带,8 例分离出二级脾蒂逐个结扎,2 例无明确脾蒂,与其余 8 例使用脾蒂钳离断脾蒂,移除脾蒂后脾蒂大针 7# 线分束缝扎,后以 3-Proline 缝扎。创面以中针 4# 线及 3-0 Proline 浆膜化。脾切除术均行贲门周围血管离断术。

2 结果

18 例均顺利恢复出院,无围手术期死亡。开腹后到脾切除完成平均耗时 55 min、出血 550 mL。术后发生 1 例腹腔内出血,急诊手术,术中发现结肠脾曲离断粘连带出血,止血后恢复顺利。8 例出现大量腹水,给予补蛋白、利尿治疗,腹水逐渐消退,痊愈出院。1 例肺部感染、左侧胸腔积液,给予抗感染、胸腔穿刺引流等处理后治愈。1 例胰瘘,静脉给予生长抑素,持续腹腔引流 3 周后,拔除腹腔引流,局部形成 4×5 cm 大小包裹,无发热出院。

3 讨论

脾功能亢进是一种临床综合征,表现为脾大、外周血血细胞减少、骨髓造血细胞增生、脾脏摘除或脾功能受损后出现血细胞减少缓慢等现象^[7-9]。随着介入医学的发展,脾动脉栓塞术被广泛应用于临床治疗脾功能亢进症^[10]。脾动脉栓塞术能够在保留正常脾功能的同时治疗脾亢进,但该方法易导致食管胃底静脉出血,造成广泛性脾周粘连,为二次手术进行脾切除增加了难度,造成手术耗时长、出血多、并发症高等,不利于患者术后恢复^[11-13]。本组收治的 18 例患者脾动脉栓塞术后均出现不同程度的发热,体温最高超过 39.0℃,最长持续时间超过 2 月,并伴有不同程度的脾周疼痛,出现脾脏炎症反应,造成脾脏梗死,周围广泛粘连,侧枝循环建立。那么,如何才能有效的提高手术疗效,我们的体会是:

3.1 脾动脉处理

脾动脉栓塞术后造成的粘连或本身脾动脉闭塞,使脾动脉的暴露和游离难度增加,游离脾动脉时会因粘连而损伤脾静

脉,引发大出血。因此,术中应尽量在脾动脉鞘内游离脾动脉,一旦发生出血,可用 3-0 Proline 缝扎^[14,15]。

3.2 脾周韧带处理

对于脾周韧带的处理应尽量按照正常步骤,即打开脾胃韧带,一直分离到胃短血管,转而游离脾结肠韧带、脾肾韧带、后腹膜韧带,断脾下极 1-2 血管分支,返回再游离结扎脾胃韧带,最后再离断结扎脾蒂,移出脾脏。本研究中出现 2 例脾脏与膈面严重粘连的病例,此时若强行游离将造成大出血^[16,17]。因此,我们采取先离断脾蒂,钝性加氩气刀游离脾上极,尽量避免损伤膈肌,快速离断脾上极后移除脾脏,以大纱布垫压迫逐个缝扎止血。

3.3 脾蒂处理

脾蒂的处理是脾切除术的关键,目前研究认为术中应尽可能的游离出二级脾蒂,分束结扎,但这种做法会引起大出血,情况非常危险^[18]。因此,对于脾蒂断端的处理,应尽量采用 3-0 Proline 连续缝合两道。由于脾大的脾蒂较短,脾动脉栓塞术后造成的脾周粘连无法分出二级脾蒂,造成脾蒂较宽,传统的结扎或分束缝扎容易导致线结滑脱或血管回缩^[19]。此外,脾蒂处理完毕,可用 3-0 Proline 将胰尾浆膜与脾蒂残端行间断或连续缝合,以达到止血和减少胰瘘的发生率。

3.4 创面处理

门静脉高压脾肿大患者行脾动脉栓塞术造成脾周粘连、侧枝循环形成,使得脾切除术造成的创面更大。此外,肝硬化患者本身凝血功能较差、侧枝循环较粗^[20]。因此,手术时应尽量缝扎使创面再浆膜化,避免使用氩气刀电凝止血,以减少对患者机体的损伤。

综上所述,脾动脉栓塞术后严重脾粘连脾切除术,手术风险较大,手术时间、术中出血较常规脾切除术明显延长、增多,因此要规范手术操作,细致分离脾周粘连,合理处理脾蒂,以达到安全、有效的手术目的。

参考文献(References)

- [1] 薛元领, 杨泽云. 探讨部分性脾动脉栓塞术治疗肝硬化脾功能亢进的临床应用[J]. 安徽医学, 2012, 33(11):1521-1522
Xue Yuan-ling, Yang Ze-yun. Clinical application of partial splenic artery embolization in spleen function of liver cirrhosis hyperthyroidism [J]. Anhui Medical Journal, 2012, 33(11):1521-1522
- [2] 杨天文, 何平, 胡勇, 等. 食管静脉套扎术联合脾动脉栓塞术用于肝硬化出血的二级预防[J]. 现代预防医学, 2012, 39(15):4011-4013
Yang Tianwen, He Ping, Hu Yong, et al. Endoscopic variceal ligation combined with splenic artery embolization for secondary prevention of bleeding in patients with liver cirrhosis [J]. Modern Preventive Medicine, 2012, 39(15):4011-4013

- Yang Tian-wen, He Ping, Hu Yong, et al. Secondary prevention of hemorrhage of esophageal veins ligation combined with splenic embolization in patient with cirrhosis[J]. Modern Preventive Medicine,2012, 39(15):4011-4013
- [3] 乔清,张云泉,李锦青,等.部分脾动脉栓塞术治疗肝硬化性脾功能亢进的临床评价[J].临床军医杂志,2012, 40(2):344-346
Qiao Qing, Zhang Yun-quan, Li Jin-qing, et al. Clinical evaluation of partial spleen embolization for hypersplenism in liver cirrhosis [J]. Clinical Journal of Medical Officers, 2012, 40(2):344-346
- [4] 惠本军,张庆桥,陈东民,等.经导管动脉化疗栓塞联合部分性脾动脉栓塞术治疗原发性肝癌合并脾功能亢进 [J].中国介入影像与治疗学, 2012, 09(4):262-265
Hui Ben-jun, Zhang Qing-qiao, Chen Dong-min, et al. Transcatheter arterial chemoembolization combined with partial splenic embolization for treatment of primary hepatocellular carcinoma associated with hypersplenism[J]. Chinese Journal of Interventional Imaging and Therapy, 2012, 09(4):262-265
- [5] Samamé J, Kaul A, Garza U, et al. Laparoscopic aneurysm resection and splenectomy for splenic artery aneurysm in the third trimester of pregnancy[J]. Surg Endosc, 2013, 27(8):2988-2991
- [6] 余灵祥,李志伟,郭晓东,等.脾切断流术对肝硬化门静脉高压症患者肝功能的影响[J].现代生物医学进展, 2013, 13(05):950-953
Yu Ling-xiang, Li Zhi-wei, Guo Xiao-dong, et al. The Effect of liver function in patients with Cirrhosis and Portal Hypertension after Splenectomy and Pericardial Blood Vessels Disarticulation[J]. Progress in Modern Biomedicine, 2013, 13(05):950-953
- [7] Bhavsar MS, Vora HB, Khiria LS, et al. Portal hypertension: effect of early splenic artery ligation on platelets count during splenectomy[J]. Saudi J Gastroenterol, 2012, 18(6): 380-383
- [8] Akamatsu N, Sugawara Y, Satou S, et al. Hemodynamic changes in hepatic circulation after modulation of splenic circulation in an in-vivo human experimental model[J]. Liver Transpl, 2014,20(1):116-121
- [9] Ekeh AP, Khalaf S, Ilyas S, et al. Complications arising from splenic artery embolization: a review of an 11-year experience [J]. Am J Surg, 2013, 205(3):250-254
- [10] 余灵祥,李志伟,郭晓东,等.脾切除术对肝炎后肝硬化患者肝癌发生的影响[J].现代生物医学进展, 2013, 13(10):1959-1961
Yu Ling-xiang, Li Zhi-wei, Guo Xiao-dong, et al. The Effect of Splenectomy on Liver Cirrhosis in Patients with Hepatocellular Carcinoma Incidence [J]. Progress in Modern Biomedicine, 2013, 13 (10): 1959-1961
- [11] Kropil F, Schauer M, Krausch M, et al. Splenic artery switch for revascularization of the liver: a salvage procedure for inflammatory arterial hemorrhage [J]. World J Surg, 2013, 37(3): 591-596
- [12] He XH, Gu JJ, Li WT, et al. Comparison of total splenic artery embolization and partial splenic embolization for hypersplenism[J]. World J Gastroenterol, 2012, 28, 18(24):3138-3144
- [13] Mousa A, Armbruster J, Adongay J, et al. Splenic artery embolization as a treatment option for chronic pancytopenia secondary to hypersplenism: a case report and review of literature [J]. Vasc Endovascular Surg,2012, 46(6):501-503
- [14] Uslu N, Aslan H, Tore HG, et al. Doppler ultrasonography findings of splenic arterial steal syndrome after liver transplant [J]. Exp Clin Transplant, 2012, 10(4):363-367
- [15] Saad WE, Anderson CL, Kowarschik M, et al. Quantifying increased hepatic arterial flow with test balloon occlusion of the splenic artery in liver transplant recipients with suspected splenic steal syndrome: quantitative digitally subtracted angiography correlation with arterial Doppler parameters[J]. Vasc Endovascular Surg, 2012, 46(5):384-392
- [16] 毕振华,郭晓东,任波,等.脾切断流术围术期患者外周血淋巴细胞的变化及免疫功能的研究[J].现代生物医学进展, 2013, 13(06): 1100-1103
Bi Zhen-hua, Guo Xiao-dong, Ren Bo, et al. Peripheral blood lymphocytes in patients with splenectomy and the study of immune function[J]. Progress in Modern Biomedicine, 2013, 13(06):1100-1103
- [17] Graham GP, Haan JM. Splenic artery embolization in a 7-year-old with blunt traumatic splenic rupture [J]. Am Surg, 2012, 78 (5): 297-298
- [18] Zhu XS, Gao YH, Wang SS, et al. Contrast-enhanced ultrasound diagnosis of splenic artery steal syndrome after orthotopic liver transplantation [J]. Liver Transpl, 2012, 18(8):966-971
- [19] Kim H, Suh KS, Jeon YM, et al. Partial splenic artery embolization for thrombocytopenia and uncontrolled massive ascites after liver transplantation[J]. Transplant Proc, 2012, 44(3):755-756
- [20] Namikawa M, Kakizaki S, Takakusaki S, et al. Gastric ulcer bleeding from a variant left gastric artery accompanied by congenital absence of the splenic artery successfully treated with coil embolization: a case report and review of the literature [J]. J Gastrointestin Liver Dis, 2011, 20(4):435-438