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个案与短篇

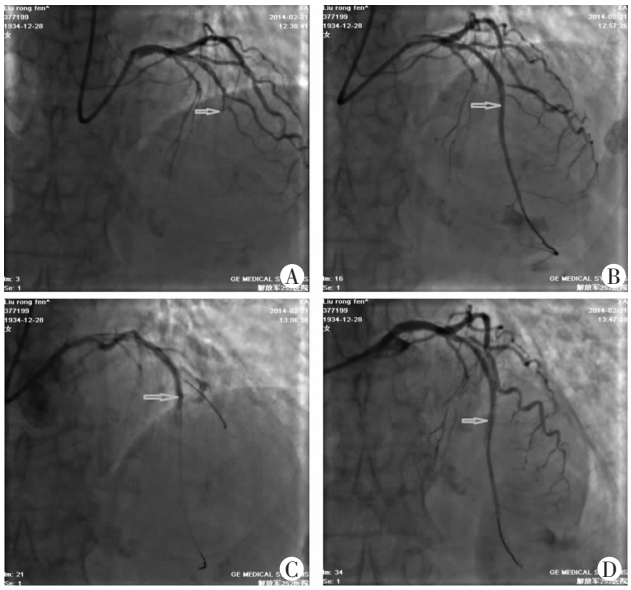
应用带膜支架抢救冠状动脉穿孔成功 1 例

田　攀,张　杨,张　刚,刘红涛,曹雪滨　(071000 河北 保定,解放军第 252 医院心血管病中心)

[**关键词**] 冠状动脉穿孔;带膜支架
[**中图法分类号**] R654.2　[**文献标志码**] B

1　临床资料

患者,女性,80 岁,主因"间断胸痛 9 h"于 2014 年 2 月 21 日入院。急诊心电图示:窦性心律,急性前壁心肌梗死,化验心梗 3 项:肌钙蛋白定量 16 ng/mL、肌红蛋白测定 74.98 ng/mL、肌酸激酶同工酶 256 U/L。既往慢性胃炎病史数年,间断返酸、烧心,无黑便史。诊断:①冠心病,急性前壁心肌梗死 Killip Ⅰ级;②慢性胃炎。患者急性心肌梗死诊断明确,入院后仍有胸痛症状,可选择静脉溶栓或急诊冠状动脉(冠脉)造影术检查,但患者年龄高于 75 岁,为溶栓禁忌证,存在较高出血风险。经家属要求行急诊冠脉造影术检查。给予阿司匹林 0.3 g、硫酸氢氯吡格雷 600 mg、阿托伐他汀钙片 80 mg 口服,质子泵抑制剂静滴。完善术前准备,冠脉造影示:冠脉呈右优势型,左主干无明显狭窄,前降支近段弥漫斑块,中段弥漫不规则狭窄 80%,第 3 对角支发出以远 100% 闭塞,血流 TIMI 0 级(图 1A)。第 2 对角支开口狭窄 50%,血流 TIMI 3 级。回旋支起始部局限狭窄 60% ~70%,血流 TIMI 3 级。右冠近段弥漫不规则斑块,血流 TIMI 3 级。行前降支血栓抽吸,于前降支植入 2.5 mm×36 mm Excel 雷帕霉素洗脱支架。因支架中段残余狭窄较重(图 1B),行支架内后扩张后出现冠脉穿孔(图 1C),立即再次植入 3.0 mm×19 mm 带膜支架覆盖穿孔处。造影示支架内无造影剂外漏,无夹层,血流 TIMI 3 级(图 1D)。患者出现呼吸减慢,血压下降,心电监护反复出现室速、室颤,反复给予电复律后转为窦性心律,同时给予静推多巴胺,静脉泵入多巴胺、气管插管、呼吸机辅助呼吸。给予心包穿刺,抽出约 100 mL 不凝血。患者在大剂量升压药物下血压不能维持,经主动脉内球囊反搏术(intra-aortic balloon counterpulsation, IABP)辅助治疗后患者血压逐渐稳定,术后积极控制感染、预防心力衰竭。术后查床旁心脏彩超示:节段性室壁运动异常(前壁)、未见心包积液。术后患者病情平稳出院。



A:前降支自第 3 对角支发出以远 100% 闭塞(↑),血流 TIMI 0 级;B:前降支植入支架,支架中段残余狭窄较重(↑);C:前降支支架中段狭窄处扩张后出现冠脉穿孔(↑),造影剂经破口喷射样外泄;D:应用带膜支架覆盖穿孔处(↑),支架内无造影剂外漏,无夹层

图 1　冠状动脉穿孔患者冠状动脉造影表现

2　讨论

冠脉穿孔是经皮冠状动脉内支架植入术(percutaneous coronary intervention, PCI)少见而严重并发症,穿孔后急性心包填

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[**通信作者**] 曹雪滨, E-mail: hebeishuangli@126.com
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塞发生率为11%~46%[1-3]。随着PCI技术的推广应用,冠脉穿孔发生率呈增加趋势。冠脉穿孔按国际Ellis分型:Ⅰ型,造影剂突出血管腔之外形成龛影,但无外漏;Ⅱ型,心外膜或者心肌造影剂染色,但并无造影剂喷射样外泄,破孔直径<1 mm;Ⅲ型,造影剂经破口喷射样外泄,进入心包腔或者冠状静脉窦,破孔直径>1 mm[4]。Ellis分型类别与穿孔后急性心包填塞的发生率、病死率密切相关。Ⅰ或Ⅱ型冠脉穿孔心包填塞发生率约为0.4%和3.3%,而Ⅲ穿孔心包填塞发生率高达45.7%[5]。

由于前瞻性研究和相关指南的缺乏,处理PCI过程中出现的冠脉穿孔有多种方法。较传统的方法是迅速应用鱼精蛋白逆转或中和肝素,起到封堵破孔的作用,但由于其可能导致大量血小板聚集、支架内血栓形成、过敏反应、心脏骤停,所以目前不推荐应用该方法[6]。长时间球囊封堵由于其可以在导管室迅速实施,在带膜支架出现前被广泛应用,但长时间球囊封堵可能会造成支架内血栓及远端支配的心肌缺血加重[7]。由于可能带来远端血管丢失及随之而来的心肌梗死的风险,弹簧圈栓塞被列入治疗方法[7]。越来越多的研究显示,应用带膜支架植入封堵破孔能达到较好的近期及远期效果[1,8]。

本例患者发生冠脉穿孔原因有:①患者年龄大,冠脉弥漫钙化;②支架中段残余狭窄较重,后扩压力偏大。通过造影确诊为Ⅲ型冠脉穿孔,迅速于穿孔处植入1枚带膜支架,成功封堵穿孔,并迅速予以心包穿刺解除心包填塞。术后应用IABP及大剂量升压药物稳定血压,根据血压情况撤除IABP及调节升压药物剂量。病情平稳后复查心脏彩超未见心包积液征象。

总之,冠脉穿孔是PCI少见而严重的并发症,心脏导管室应常备带膜支架、灌注球囊等器材,并应有具备冠状动脉搭桥术条件的心脏外科支持,及时正确地处理是减少恶性心脏事件的关键。

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