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bleomycin A5 in 35 mongrel dogs. The medicine was respectively administered in the following procedures: ① intrabronchial instilling; ② intrabronchial aerosol ventilation and ③ aerosol ventilation combined with pulmonary perfusion. Sequential HRCT-pathological correlative study was performed at predetermined intervals. **Results:** HRCT demonstrated different changes produced by different procedures of medicine administration and showed good correlation between HRCT features and pathological findings. The lesions in the lung induced by aerosol ventilation was extensive and could be found even at the sub-pleural area. With the procedure of intrabronchial instilling, there were severe selective fibrosis in one lobe. **Conclusion:** It is a simple and inexpensive method to establish animal model of pulmonary fibrosis in dogs with bleomycin A5.

Key words animal model; computed tomography; pulmonary fibrosis; bleomycin A5; dog

经皮二尖瓣球囊成形术并发心脏穿孔的救治

Surgical repair of cardiac perforation complicating percutaneous ballon mitrial valvuloplasty

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我科近年成功抢救2例经皮二尖瓣球囊成形术(PBMV)并发心脏穿孔、急性心包填塞的患者,现报告如下。

病例1,女,39岁,因活动后心悸、气促5年,加重1月收治入院。诊断为风湿性二尖瓣狭窄。1992年11月19日行经皮二尖瓣球囊成形术,房间隔穿刺成功后,患者出现血压下降、心率减慢、心音遥远,伴有躁动、呼吸困难。迅速行心包穿刺抽出大量血液,随后血压测不出,予以心脏按压、肾上腺素、碳酸氢钠、多巴胺等治疗并急送手术室,采用左前外侧切口第四肋间入胸,行左房修补、二尖瓣闭式分离术。术中发现左房与左下肺静脉交界处有1.0 cm破口,予以缝合修补。循环平稳后行二尖瓣闭式扩张术,扩张瓣口面积至3.1 cm^2,心包开窗,关胸。患者恢复顺利,术后20 d痊愈出院。

病例2,女,43岁,活动后心悸、气促1年,加重1月收治入院。诊断为风湿性二尖瓣狭窄,心功能Ⅱ级。于1995年7月11日行二尖瓣球囊成形术。患者术中平稳,术后50 min呕吐1次,术后2 h患者述腹胀、心悸,血压11/7 kPa,心率115次/min,随即血压不能测出,迅速行心包穿刺,先后共抽出1 000 ml血液,部分血液给予自体回输,血压回升并立即送手术室,采用左前外侧切口第四肋间入胸腔,行左房修补。发现左房底部出血,心房破口位置探查不清,横断胸骨延长切口至对侧胸腔,建立体外循环,在辅助循环下抬起心脏,发现破口位于靠近左上肺静脉入口处的左房底部,破口约0.5 cm,予以直接缝合。术中体外循环辅助69 min。患者恢复顺利,术后23 d痊愈出院。

讨论

PBMV因创伤小、疗效可靠,已逐步取代二尖瓣闭式扩张术被广泛采用,然而心脏穿孔、急性心包填塞是其严重的并发症,处理不及时可导致患者死亡。PBMV引起急性心包填塞多因房间隔穿刺过深,伤及左房、左室所致,其中以伤及左房后壁最为多见[1]。本组2例均为左房后壁损伤。PBMV术中患者一旦出现心悸、气促、血压下降、心音遥远等表现,应首先考虑心脏穿孔,急性心包填塞,心包穿刺引流既能协助明确诊断,又能缓解心脏填塞症状,为手术赢得时间。部分裂口较小、症状较轻的患者,经心包穿刺引流后可以治愈[2]。在心包引流后症状无明显缓解者,应积极进行手术治疗,病情紧急时可在导管室开胸止血修补[3]。因心脏裂口多发生在左房、左室,对怀疑左房、左室穿孔者,应选左前外侧切口进行开胸探查修补止血,循环稳定后可经左侧径路行二尖瓣闭式扩张术。对术前不能确定裂口部位者可选正中劈胸骨入路探查,对裂口位置深不易暴露者,可建立体外循环,在体外循环辅助下,抬起心尖可完成修补。

关键词 经皮二尖瓣球囊成形术;心包填塞
中图法分类号 R654.1

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