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Determination of anesthetic potency of propofol

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Abstract Objective: To investigate the effects of propofol on the minimum alveolar concentration (MAC) and MAC to blocking adrenergic responses (MAC-BAR) of enflurane to determine the anesthetic potency of propofol. Methods: Thirty patients were equally randomized into two groups. The initial surgical skin incision was used as the standard noxious stimulus for determination of MAC. Propofol with the dose of 3 mg·kg^{-1} was injected and then continuously infused at a dose of 53.8 μg·kg^{-1}·min^{-1}. Results: MAC and MAC-BAR of enflurane were 1.609Vol% and 1.736 Vol% respectively. Compared with those previously reported, propofol could not significantly influence MAC of enflurane but decrease MAC-BAR by 35.5%. Conclusion: Propofol has no effects on enflurane's MAC but helpful for blocking the cardiovascular and neuroendocrine responses.

Key words propofol; MAC; MAC-BAR

心内膜心肌活检诊断心内膜弹力纤维增生症的价值(附2例报告)

Endomyocardial biopsy the diagnostic value of for endocardial fibroelastosis

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心内膜弹力纤维增生症(Endocardial fibroelastosis, EF)是一种少见的先天性心内膜病变,约75%于1岁末死亡,以往确诊主要靠死后病理检查。近年来由于心内膜心肌活检(Endomyocardial biopsy, EMB)的开展,已能使本病在生前做出明确诊断,本研究结合我们对2例EF患者进行EMB的体会,着重探讨EMB对EF的诊断价值。

1 病例资料

病例1,男,1.7岁,因劳累性心慌、气短4年,加重伴双脚浮肿1个月,于1985年9月4日入院。查体:血压12/8 kPa,颈静脉怒张,肝-颈静脉回流征(+),心浊音界向两侧扩大,心率105 bpm,心律绝对不齐,各瓣膜区未闻及杂音,肝肋缘下3 cm,双下肢浮肿(+)。心电图示心房纤颤、右室肥大伴劳损;X线胸片示心影增大、心胸比例69%;超声心动图示右室内径36 mm,左室内径42 mm,室壁顺应性降低。于1985年9月18日行右心室EMB,术中感心内膜壁光滑、较硬,钳夹组织困难,先后10余次仅取出6块芝麻粒大小的组织,光镜检查为纤维组织,未见心肌细胞;石蜡包埋切片,HE及弹力纤维染色,见成片的弹力纤维组织及少量的纤维组织。诊断为"心内膜弹力纤维增生症、充血性心力衰竭",给口服强的松、地高辛等治疗,患者于1988年2月,因充血性心力衰竭死亡。

病例2,女,1.2岁,出生后3个月即发生阵发性室上性心动过速,2岁后便出现心慌、气促,运动耐量较同龄儿童差,曾在外院诊断为"预激综合征伴阵发性室上性心动过速",并疑有"心内膜弹力纤维增生症伴心功能不全",给口服地高辛、强的松及抗病毒药物等治疗达3年之久,心功能不全症状消失而自行停药。近年来因阵发性室上性心动过速发作频繁、活动后心慌气促再现,于1996年1月29日入我科。查体:血压13/8 kPa,心浊音界向左侧扩大,心率88 bpm,律齐,心尖区可闻及II级收缩期吹风样杂音。心电图示B型预激综合征,继发性ST-T改变;X线胸片示心影增大、心胸比例76%;超声心动图示左室明显增大(左室舒张末内径60 mm),室壁顺应性降低,左室射血分数37%。于1996年2月8日行射频导管消融术及左、右室EMB,术中感左室心内膜壁光滑、较硬,钳夹组织困难,右室手感不明显;先后从左室取出5块、从右室取出4块芝麻粒大小的组织,光镜检查见左、右室组织均显示心内膜增厚,纤维组织增生,内膜下心肌细胞肥大,核呈短杆状,胞浆丰富;弹力纤维染色见左室心内膜弹力纤维呈片状增生、增粗,右室心内膜可见少量的弹力纤维。确诊为心内膜弹力纤维增生症,给口服强的松及小剂量地高辛治疗,随访2年,患者已停用地高辛,日常生活及学习无不适。

2 讨论

心内膜弹力纤维增生症临床少见,病因不详,虽多为左室或双心室病变,但也可为单纯右心室心内膜弹力纤维增生[1]。

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Studies on the expression of HSV_1-TK gene *in vitro* and *in vivo* after transduction into human pulmonary carcinoma cell line A549

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Abstract Objective: To observe the expression of TK gene *in vitro* and *in vivo* after it being transduced into A549 cells. Methods: The constructed retroviral vector PLXSN-TK was transduced into A549 cells by electro-transformation. The TK mRNA expression in A549-TK cells and tumor tissue formed by itself in nude mice was determined with *in situ* hybridization. Recombination of TK gene into cells is examined with blot hybridization. Sensitivity of A549-TK cells to GCV was also observed *in vitro*. Results: *In situ* hybridization showed that A549-TK cells and tumor tissue positively expressed TK mRNA while the control cells did not. Blot hybridization showed that TK gene was recombined in A549-TK cells. The sensitivity of A549-TK cells to GCV was 46 times higher than that of parental cells. Conclusion: TK gene is positively expressed in A549-TK cells and the sensitivity to GCV is also obtained by A549-TK cells.

Key words pulmonary tumor; gene transfer; gene expression; ganciclovir

(上接 374页)

心内膜弹力纤维增生症可与其他先天性心脏病并存,如主动脉缩窄。单纯性心内膜弹力纤维增生症多无特征性改变,临床诊断主要依据以下几个方面:① 有急性或反复充血性心力衰竭发作,特别是 6个月以下的婴儿;② 心脏增大而无杂音;③ X线示心脏中度至高度增大,伴左或右心缘局限性搏动减弱;④ 心电图示心室肥厚和 ST-T改变;⑤ 超声心动图示心腔扩大,心内膜增厚[2,3]。由此可见,其诊断指标缺乏特异性,尤其当合并其他先天性心脏病时,其表现可相互影响或被掩盖,使诊断更为困难。如本组例 2患者,其临床特征虽与以上几点部分相符,但因合并预激综合征,心电图有继发性 ST-T改变,使本病的心电图改变不明显;同时由于阵发性室上性心动过速反复发作,其心脏增大尚不能除外心动过速性心肌病,故需要更特异的诊断方法确诊。

EMB作为一种检查诊断方法,可为 65% ~ 85%的心肌病患者提供病理学诊断证据,并可用于病因学研究,尤其适用于心内膜心肌病变[4];本组 2例患者,经 EMB均作出了病理学诊断,表明 EMB对确诊心内膜弹力纤维增生症具有重要价值,故对临床上怀疑本病者应争取做 EMB,以便明确诊断,及早给予相应治疗。根据对此 2例患者 EMB的体会,我们认为,在对心内膜弹力纤维增生症行 EMB时,应特别注意本病心内膜结构上的特殊性,即心内膜增厚、表面光滑而硬,在钳取组织时应根据手感适当用力,既保证取出心内膜心肌组织,又不至于发生心脏穿孔。此外,EMB也有一定的局限性,其取材体积小、数量少,当病变呈局灶性或不均匀分布时,易得出假阴性结果,故在分析结果时应引起注意。

关键词　心内膜心肌活检;心内膜弹力纤维增生症

中图法分类号　R446.8; R542.43

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