

希氏束逆传不应期心室期前收缩刺激鉴别间隔部 隐匿性房室旁道 142 例分析

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[摘要] 目的:探讨希氏束逆传不应期心室期前收缩刺激法鉴别间隔隐匿性房室旁道的应用要点。方法:74例慢-快型房室结折返性心动过速(AVNRT)和68例间隔部隐匿性快旁道引起的房室折返性心动过速(AVRT)患者,成功消融前常规行腔内电生理检查,同时行希氏束逆传不应期心室期前收缩刺激法。结果:心动过速时希氏束逆传不应期内心室期前收缩刺激,74例AVNRT患者心房激动无明显提前(变化<10 ms),68例AVRT患者心房被提前激动超过20 ms(30~50 ms);此方法鉴别AVRT和AVNRT的敏感性与特异性均达100%。结论:心动过速时希氏束逆传不应期行心室期前收缩刺激法鉴别诊断AVRT和AVNRT的敏感性和特异性很高,且操作简单。但行此法检查时要求有持续发作的心动过速,能够标测出清晰的希氏束电位,心室期前收缩刺激最好与希氏束电位同步发放,反复多次重复检测可进一步提高诊断的准确性。

[关键词] 心室期前收缩;希氏束逆传不应期;鉴别诊断

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His bundle conduction refractory period of ventricular premature stimulation in differential interval of concealed atrioventricular pathway: analysis of 142 cases

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Abstract Objective: To investigate the value of ventricular premature beat when His bundle is refractory during tachycardia in distinguishing atrioventricular septal fast pathway. **Method:** Seventy-four patients with slow-fast AVNRT and 68 patients with AVRT using concealed septal accessory pathway, underwent invasive electrophysio-

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logical studies and ventricular premature beat was induced when His bundle was refractory during tachycardia. **Result:** When His bundle conduction refractory period within the ventricular premature beat stimulus during tachycardia, 74 cases with AVNRT were not obvious early atrial activation (variation was less than 10 ms), in 68 cases with AVRT, the atrial premature excited more than 20 ms (30~50 ms). The sensitivity and specificity of the method to identify AVRT and AVNRT were 100%. **Conclusion:** The sensitivity and specificity of the method to identify AVRT and AVNRT are quite high, and the operation is simple. But the inspection requires sustained tachycardia and a clear His bundle potential. Ventricular premature stimulus and His bundle electric potential should be synchronization, and repeated repetition detection could improve the accuracy of diagnosis.

Key words ventricular premature beat; His bundle refractory; differential diagnosis

由间隔部房室快旁道引发房室折返性心动过速(AVRT)时,其腔内心电图改变与慢-快型房室结折返性心动过速(AVNRT)的腔内心电图非常相似。正确掌握二者的鉴别诊断方法对射频消融术成功治疗心动过速有非常重要的临床意义。希氏束逆传不应期心室期前收缩刺激法是目前诊断AVRT的重要标准^[1-3]。但目前详细介绍此方法和要点的文献尚不多见。本文观察142例AVNRT和间隔隐匿性房室快旁道引发的AVRT患者,在射频消融术成功治疗心动过速前,采用希氏束逆传不应期心室期前收缩刺激法分别对其进行检测,现将有关体会报告如下。

1 对象与方法

1.1 对象

74例慢-快型AVNRT患者,男24例,女50例;年龄16~76(36±21)岁,心动过速史2~30年。68例间隔隐匿性AVRT患者(右前、右中、右后、左中、左后间隔旁道分别为11、3、24、3、27例),男36例,女32例,年龄18~71(36±22)岁,心动过速病史1~20年。

1.2 电生理检查

所有患者术前均停用各种抗心律失常药物4个半衰期以上,将6F10极电极经左锁骨下静脉或颈内静脉送至冠状静脉窦内,3根6F4极电极分别经双侧股静脉送至右室心尖、希氏束和右心耳,行常规电生理检查并诱发出心动过速,心动过速发作时行希氏束逆传不应期心室期前收缩刺激法:心动过速时,在希氏束逆传不应期(希氏束同步)行心室RS2期前收缩刺激,心室期前收缩刺激夺获心室时,体表QRS均显示心室融合波,此时对比心动过速时的自身心房时限(AA间期)与早搏刺激夺获心室时的AA间期,如刺激夺获心室时的AA间期与心动过速时的AA间期差值<10ms(心动过速周长恒定)则考虑心房未被提前激动,诊断AVNRT,如差值超过10ms(心动过速周长恒定)则考虑心房被提前激动,诊断快旁道引起的AVRT。

1.3 检查仪器

四川锦江通用实业有限公司生产的LEAD-2000B多道电生理仪,荷兰飞利浦公司生产的FD20 X光造影机。

1.4 统计学处理

数据以 $\bar{x} \pm s$ 表示,两组均数比较采用 t 检验, $P < 0.05$ 为差异有统计学意义。

2 结果

2.1 常规电生理检查结果

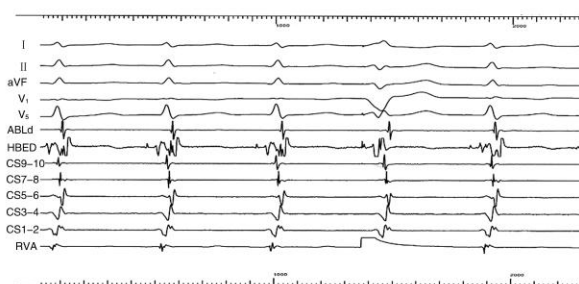
所有患者心动过速发作时体表心电图均为窄QRS图形,在房室交界区记录到最早逆向心房激动。74例AVNRT患者心室程序刺激时,71例室房逆传呈递减传导;3例心室刺激S1S2 450/270~450/260ms之前室房递减传导不明显,此后在室房传导消失前出现室房递减传导;53例心房程序刺激时,房室传导呈“双曲线”反应,AVNRT的发作依赖冲动从慢径路下传伴临界性的A-H跳跃。68例AVRT患者心室程序刺激时,64例患者室房呈“全或无”式传导;4例心室刺激S1S2 450/310~450/300ms时室房出现70、90ms“跳跃”传导,之前室房无明显递减传导,此后之后出现室房递减传导。

2.2 心室期前收缩刺激法检测结果

74例AVNRT患者AA差值为(4±3)(-4~8)ms,均小于10ms,见图1;68例AVRT患者AA差值为(40±14)(30~60)ms,均大于10ms,见图2。AVRT和AVNRT患者AA差值差异具有统计学意义($P < 0.01$),心室早搏刺激法诊断AVNRT与AVRT的特异性及敏感性均达100%。

2.3 射频消融术治疗结果

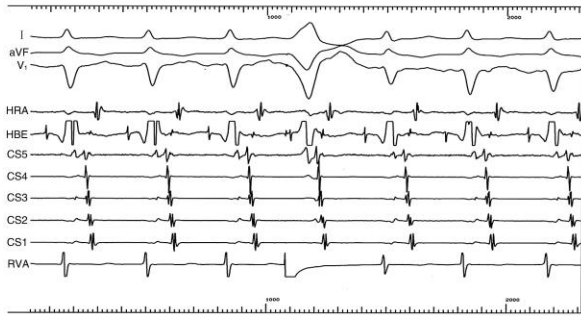
根据希氏束逆传不应期心室期前收缩刺激法检测结果,对142例患者分别采用不同消融方式,均成功治愈,随访6~36个月无复发。



体表QRS出现融合波,但没有提前激动心房。

图1 AVNRT患者心室期前收缩刺激

Figure 1 Ventricular premature stimulation in patients with AVNRT



体表 QRS 出现融合波,提前激动心房 60 ms。

图 2 AVRT 患者心室期前收缩刺激

Figure 2 Ventricular premature stimulation in patients with AVRT

3 讨论

房室旁道参与的 AVRT 位于左、右游离壁的旁道时,在心动过速发生时呈偏心性心房逆传激动,因此很容易被诊断;位于间隔部只有逆传,但无前传功能的旁道称间隔部隐匿性房室旁道,由其引起的 AVRT 发作时在间隔部可测及最早逆行心房激动,其腔内心电图改变与慢-快型 AVNRT 的腔内心电图有时非常相似^[4-5]。通常窦性心律下采用心室程序刺激可将二者区别。随着心室刺激联律间期的不断缩短,间隔隐匿性旁道患者的室房逆传间期通常无明显延长呈“全或无”式传导,而 AVNRT 患者的室房逆传间期则逐渐延长,以此可将二者区别^[3-4]。但心室程序刺激时,部分 AVNRT 患者室房逆传总是通过快径传导,因而室房逆传间期可无明显延长。本组资料中 3/74 例出现该现象。有些患者旁道逆传不应期较房室结逆传不应期长很多时,心室程序刺激室房逆传可能开始由旁道传递,后来转至经房室结逆传激动心房,此时室房逆传间期仍呈递减传导,而且有“跳跃”。本研究中 4/68 例出现该现象。在上述情况下,心室程序刺激则不能将间隔部隐匿性房室快旁道引起的 AVRT 与 AVNRT 相区分。

本研究表明,采用希氏束逆传不应期心室期前收缩刺激诊断间隔隐匿性快旁道引起的 AVRT 和 AVNRT,以诊断均成功进行消融治疗,进一步证明该方法具有很高的特异性和敏感性,具有很高的临床应用价值^[4-6]。

本研究中 13 例患者在心动过速发作初始进行检测时,由于心动过速周长不稳定,检测结果相互矛盾,但心动过速周长恒定后检测时,均得出重复性非常好的结果,以此做出了正确的诊断。34 例患者起初无法诱发出心动过速或心动过速持续时间过短,通过静脉注射异丙肾上腺素或阿托品诱发出

持续的心动过速后方开始检测。故持续、恒定的心动过速周长是正确进行该项检查的基础。

明确心室期前收缩刺激恰好落入希氏束逆传不应期是正确诊断鉴别间隔隐匿性 AVRT 和 AVNRT 的关键,因此心动过速时标测出清晰的希氏束电位有利于判断心室期前收缩刺激是否落入希氏束逆传不应期。国外学者认为,希氏束电位前 30~55 ms 后均为希氏束逆传不应期。本研究认为心室期前收缩刺激最好与希氏束电位同步发放,更便于明确心室期前收缩刺激正好落入希氏束逆传不应期,以此得出正确的检测结果。

本研究中所有患者均重复采用此法检测 2~3 次,如结果出现矛盾则进一步重复检测,同时分析出现矛盾的原因,因此 142 例患者都得到了正确的诊断和治疗。所以反复多次检测也是避免误差、提高诊断鉴别价值的重要方法。

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