

胶囊内镜检查对双气囊小肠镜进镜方式选择的指导作用

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■背景资料

胶囊内镜和双气囊小肠镜检查是近年开展应用的小肠疾病诊治领域新方法。胶囊内镜和双气囊小肠镜联合应用日益受关注。

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Directive role of capsule endoscopy in determining the route for double-balloon enteroscopy

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Abstract

AIM: To evaluate the role of capsule endoscopy in determining the route for double-balloon enteroscopy.

METHODS: Twenty patients with negative or equivocal evaluation after capsule endoscopy received double-balloon enteroscopy (under anesthesia with propofol) by oral or anal route. The choice of the insertion route of the endoscope for the first attempt at double-balloon enteroscopy was made according to a time index (the value of the time in minutes for transit of the capsule endoscope from the pylorus to the lesion divided by the value of the time for transit of the capsule endoscope from the pylorus to the cecum). An anal route was indicated when the time index was more than 0.50. A second procedure was undertaken through the alternative route several days later when the lesion of inter-

est was not found during the first one. The accuracy for choosing the route of double-balloon enteroscopy according to the capsule time index was then analyzed.

RESULTS: Five patients with negative evaluation after capsule endoscopy received double-balloon enteroscopy, and a lesion was detected in 1 of these patients when a second procedure by the anal route was performed. Fifteen patients with equivocal evaluation after capsule endoscopy received double-balloon enteroscopy, and the suspected findings were confirmed in 12 (80.0%) of these patients by double-balloon enteroscopy combined with pathological examination. An anal route of the endoscopy at the first attempt with double-balloon enteroscopy was selected on 4 patients (0.99, 0.8, 0.65, and 0.59, respectively), and the lesions were detected in the latter two (with a time index of 0.65 and 0.59, respectively) when a second procedure by the oral route was performed. If the time index of more than 0.75 (with consideration of another report) was used, no further attempts would be needed in these two patients, and the lesions of the other two patients were assumed to be located in the distal ileum and reached by double-balloon endoscopy via anal route exactly.

CONCLUSION: The outcome of capsule endoscopy can direct the choice of routes for double-balloon enteroscopy. A time index of more than 0.75 appears to indicate an anal route as the first procedure.

Key Words: Capsule endoscopy; Double-balloon enteroscopy; Anal route; Oral route

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摘要

目的: 探讨胶囊内镜检查对双气囊小肠镜进镜方式选择的指导作用。

方法: 胶囊内镜检查阴性或可疑病变者20例

行双气囊小肠镜检查(均在麻醉下进行), 包括经口和经肛进镜方式. 根据胶囊内镜时间指数(胶囊内镜从幽门至病灶的通过时间/幽门至回盲瓣的通过时间)选择首次进镜方式, 时间指数 >0.50 时首先考虑经肛进镜检查, 对未发现异常者择期改换方式再行检查. 分析按胶囊内镜时间指数选择双气囊小肠镜进镜方式的准确性.

结果: 胶囊内镜检查阴性者5例, 行经口双气囊小肠镜检查, 有1例在改为经肛检查后检出病灶. 胶囊内镜检查怀疑小肠病变者15例, 有12例(80.0%)经双气囊小肠镜结合活检病理确诊. 以时间指数 >0.50 为标准, 4例(分别为0.99, 0.8, 0.65和0.59)首选经肛进镜检查, 后二者(时间指数分别为0.65和0.59)需换从口侧进镜检查而检出病灶; 如以时间指数 >0.75 为标准, 该2例不再需要改换方式再行检查, 另2例病变部位被判断为回肠远端, 经肛进镜即可准确到达病灶.

结论: 胶囊内镜检查可指导对双气囊小肠镜进镜方式的选择, 时间指数 >0.75 提示首选经肛进镜检查.

关键词: 胶囊内镜; 双气囊小肠镜; 经口进镜; 经肛进镜

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0 引言

双气囊小肠镜检查是近年开展应用的小肠疾病诊治领域的新方法^[1-10], 其检查范围和对小肠疾病的诊断率均远高于传统的推进式小肠镜^[11-12]. 双气囊小肠镜检查包括经口和经肛进镜方式, 通过二种方式的结合可完成全小肠检查. 对怀疑小肠疾病者, 病变部位的准确判断有助于双气囊小肠镜检查方式的选择, 从而减少或避免改换方式再行检查所带来的不良反应发生率增高、费用增高和患者依从性降低等后果. 由于传统的影像学等检查对小肠疾病诊断率均远低于胶囊内镜检查^[13], 后者已逐渐成为怀疑小肠疾病者首选的检查方法, 而双气囊小肠镜检查更适合作为胶囊内镜检查后补充检测手段^[14-16], 因此胶囊内镜下判断小肠病变部位的准确性可能成为双气囊小肠镜检查方式选择的重要影响因素. 本研究通过对原因不明的怀疑小肠病变患

者分别行胶囊内镜和双气囊小肠镜检查, 分析胶囊内镜检查对双气囊小肠镜检查方式选择的指导作用.

1 材料和方法

1.1 材料 2004-01/2006-01经B超、胃镜、结肠镜、上消化道钡餐、钡剂灌肠、小肠钡灌、CT、血管造影或核素扫描等检查未发现病因, 而要求进一步检查的消化道出血、腹痛或腹泻患者中, 先后行胶囊内镜和双气囊小肠镜检查者20例. 男8例, 女12例, 平均年龄51.9 (29-76)岁. 胶囊内镜检查5例未检出病灶, 15例发现可疑小肠病变. 双气囊小肠镜检查包括经口和经肛进镜方式, 对胶囊内镜未检出病灶者, 首先选择经口进镜; 对胶囊内镜发现可疑病变者, 根据时间指数(胶囊内镜从幽门至病灶的通过时间/从幽门至回盲瓣的通过时间)结合胶囊内镜二维轨迹图决定首次小肠镜检查方式, 时间指数 >0.50 时首先考虑经肛检查. 对初次检查未检出病灶者, 择期改换进镜方式再行检查.

1.2 方法

1.2.1 胶囊内镜检查 采用以色列Given影像公司生产的操作系统, 包括M2A胶囊内镜、数据记录仪组件和Rapid工作站. 每例患者采集50 000张左右的图像, 保存在与传感器相连的数据记录仪中. 检查结束后, 从记录仪中下载图像数据至Rapid工作站进行处理, 然后分别由2位有经验的消化科医师进行独立回顾分析. 患者在检查前至少禁食8 h. 检查结束时, 要求其仔细检查粪便以确认胶囊内镜排出体外.

1.2.2 双气囊小肠镜检查 采用富士能EN450 P5型双气囊电子小肠镜操作系统, 由术者和助手配合进行操作. 当内镜前端超过空回肠交界区而仍未发现病灶时, 即向黏膜下注射靛胭脂(10 g/L) 2 mL, 作为从另侧进镜检查的范围标记. 经专用活检钳(外径1.8 mm)取病理标本. 检查前1 d流质饮食, 检查前8 h禁食, 经肛方式检查者检查前4 h服用复方聚乙二醇电解质溶液(含聚乙二醇118 g, 深圳万和制药有限公司)以清洁肠道. 整个操作过程均在静脉内异丙酚麻醉下进行, 由2位麻醉科医师负责麻醉操作和心电监护.

2 结果

胶囊内镜检查阴性者5例接受经口双气囊小肠镜检查, 有1例在改为经肛检查后检出病灶. 15例胶囊内镜检查怀疑小肠病变者中, 8例时间指数未超过0.50者首选经口进镜检查, 其中5例检出

■相关报道

Gay *et al*研究发现, 根据胶囊内镜检查结果除可筛选双气囊小肠镜检查指征外, 还可作为双气囊小肠镜检查方式的可靠选择依据.

■应用要点

根据简易指标选择双气囊小肠镜进镜方式,从而减少或避免改换方式再行检查所带来的不良后果.

表 1 对胶囊内镜怀疑小肠病变者根据时间指数等因素选择双气囊小肠镜进镜方式的结果

No	经口双气囊 小肠镜检查	经肛双气囊 小肠镜检查	胶囊内镜从口腔至病灶的 通过时间 (min)	胶囊内镜 时间指数 ¹
1	十二指肠降段孤立溃疡		65	0.28
2		回肠远端孤立溃疡	415	0.99
3	空肠中段血管发育不良		71	0.13
4	空肠远端恶性肿瘤		72	滞留
5	空肠中段恶性肿瘤		266	滞留
6	空回肠交界区恶性肿瘤		73	滞留
7		—	113	0.59
	空回肠交界区多发血管发育不良			
8	空肠上段血管瘤		82	0.20
9	空肠上段血管瘤		42	0.03
10		—	281	0.65
	空回肠交界区克罗恩病			
11		回肠远端克罗恩病	224	0.80
12	空肠上段血管发育不良		118	0.06
13	—		120	0.35
		—		
14	—		10	0.01
		—		
15	—		73	0.31
		—		

¹时间指数 = 胶囊内镜从幽门至病灶的通过时间/从幽门至回盲瓣的通过时间.

病灶并明确诊断, 3例换从肛侧进镜检查后仍未检出病灶; 3例胶囊内镜滞留于病灶者(至检查结束时胶囊内镜仍停留于病灶处, 3-5 d后自行排出体外; 全消化道钡餐和CT检查未发现病灶)选择经口进镜检查后均检出病灶(均为恶性肿瘤); 4例时间指数超过0.50者(分别为0.99, 0.8, 0.65和0.59)首选经肛进镜检查, 其中前二者(时间指数为0.99和0.8)小肠镜到达病灶部位并明确诊断; 后二者(时间指数为0.65和0.59)未发现异常, 换从口侧进镜检查后检出病灶, 如以时间指数>0.75(结合文献报道)为标准, 该2例不再需要改换方式再行检查. 胶囊内镜和双气囊小肠镜检查平均间隔时间为12.9 (2-50) d, 后者平均检查时间79 (65-105) min(表1). 胶囊内镜检查者未出现任何不适反应. 20例患者行30次双气囊小肠镜检查后, 70.0% (21/30)出现头晕、咽喉轻微疼痛、腹胀气、轻微腹痛、恶心或呕吐等不适反应, 均自行缓解, 未出现出血、穿孔、胰腺炎、感染等操作相关并发症.

3 讨论

作为一种非损伤性检查方法, 胶囊内镜的应用

使全小肠检查成为可能^[17-26], 且多项研究结果表明, 胶囊内镜检查可作为怀疑小肠疾病, 尤其是不明原因消化道出血的首选检查方法; 而同样作为小肠疾病诊治的有效方法, 双气囊小肠镜具有活检功能、随意控制移动方向、注气、冲洗和治疗等多项胶囊内镜所缺乏的特点, 可作为胶囊内镜检查后很好的补充检测手段^[14-16]. 双气囊小肠镜经口进镜可到达回肠中段, 经肛进镜可到达回盲瓣上方100-150 cm, 通过二种方式的结合亦可完成全小肠检查^[1,27]. 因此对胶囊内镜检查未检出病变, 尤其是发现可疑病变者再行双气囊小肠镜检查将成为小肠疾病的首选诊治策略. 由于双气囊小肠镜检查大多需静脉麻醉下进行, 操作时间较长, 需二位医师配合进行, 有一定的不良反应发生率, 少数还可发生穿孔等并发症^[28], 且患者依从性远低于胶囊内镜检查, 部分初次检查未明确病因者可能因费用增加或担心不良反应等而不愿再接受第2次小肠镜检查, 因此对怀疑小肠疾病者, 提高初次检查成功率无疑具有重要的临床意义. 双气囊小肠镜首次检查时, 二种进镜方式的选择取决于对病变部位的预先判断. 根据上述小肠疾病诊治

策略, 胶囊内镜下判断小肠病变部位的准确性, 从而可能成为双气囊小肠镜检查方式选择的重要影响因素, 同时也利于术前定位和进一步随访的解剖定位。

胶囊内镜检查过程中, 根据二维轨迹图可初步判断胶囊内镜到达病灶的可能部位, 但准确性并不理想, 仅能作为参考^[29]。本研究中, 在胶囊内镜怀疑小肠病变者中, 80.0% (12/15)经双气囊小肠镜找到病灶并明确诊断。虽然大部分病变通过经口方式检查即可检出, 还是有2例需经肛方式检查获得诊断。与经口进镜比较, 由于可能出现结肠襻曲而使经肛进镜操作难度更大, 插入距离相对较短, 因此更有必要选择合适的初次检查方式。胶囊内镜到达病灶的通过时间受胃排空时间和小肠转运速度等多种因素影响, 如根据胶囊内镜从口腔至病灶的通过时间, 3例最长者中1例病变位于空肠中段, 需经口进镜检查, 因此准确性不够高。Gay *et al*^[16]研究发现, 根据胶囊内镜检查结果除可筛选双气囊小肠镜检查指征外, 胶囊内镜时间指数>0.75可作为双气囊小肠镜经肛方式检查的可靠选择依据。本研究中, 根据时间指数>0.50, 4例患者首选经肛小肠镜检查, 准确性仅50.0% (2/4); 而采用上述时间指数>0.75的标准, 准确性即达到100%。由于先后行胶囊内镜和双气囊小肠镜检查者数量有限, 该标准还有待更大样本的研究证实。

总之, 本研究结果初步表明, 胶囊内镜检查结果可指导对双气囊小肠镜进镜方式的选择, 从而减少盲目检查所带来的诸多不良后果。时间指数>0.75提示病变位于回肠远端, 提示首选经肛进镜检查; 反之则首选经口进镜检查。

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■同行评价

本文文章设计合理, 研究方法得当, 资料详实可靠, 有较高临床工作指导价值。

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• 消息 •

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