

良恶性胃壁增厚的CT鉴别

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Computed tomography differentiation of benign and malignant gastric wall thickness

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Abstract

AIM: To determine the sensitivity and specificity of the computed tomography (CT) for differentiating benign and malignant thickness of the gastric wall.

METHODS: The data were collected from 40 patients with gastric wall thickness determined by spiral CT examination, who underwent barium meal examination within 4 wk before or after the CT examination. The CT images were reviewed to determine the degree of the gastric wall thickness and the symmetry, distribution, and enhancement of the thickened wall. The sensitivity and specificity of CT in detecting the malignant tumor were calculated through the above features.

RESULTS: Of the 40 cases, 20 were with gastritis, 4 with hiatal hernia, 3 with benign ulcer, 3 with benign gastric neoplasm, 8 with malignant neoplasm, and 2 with no abnormality. The mean thickness of the gastric wall was 14 mm (7-65 mm). All the gastric walls with thickness ≥ 10 mm were diagnosed as malignancy by CT, and the sensitivity rate was

100%, but the specificity rate was 43%. The sensitivity rate for focal, eccentric, and enhanced gastric wall thickness was 93%, 71%, and 43%, and the specificity rate was 8%, 75%, and 88%, respectively. Generally, the sensitivity for detecting 10 mm- or more than 10 mm-thick gastric walls, which were focal, eccentric, and enhanced, was 36%, but the specificity was 93%.

CONCLUSION: After a comprehensive consideration of focal, eccentric, and enhancing thickness, the specificity rate of CT can be greatly increased, so further examination should be performed in the near future.

Key Words: Gastrointestinal tract; Barium meal examination; Stomach; Computed Tomography; Neoplasm

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摘要

目的: 确定CT鉴别良恶性胃壁增厚的敏感性和特异性。

方法: 在螺旋CT和数字胃肠光盘中收集到40例螺旋CT见胃壁增厚, 且在作CT检查前或后4 wk内作过钡餐检查的患者。复习其CT表现, 并以胃壁增厚的程度、对称度、分布和强化等特点确定CT发现恶性胃壁增厚的敏感性和特异性。

结果: 最后诊断胃炎20例、食道裂孔疝4例、良性溃疡3例、良性肿瘤3例、恶性胃肿瘤8例、正常2例。40例胃壁平均厚度14 mm(7-65 mm)。胃壁厚度 ≥ 10 mm诊断恶性肿瘤的敏感度100%, 特异性为43%, 而局限性、偏心性、强化型胃壁增厚的敏感度分别为93%、71%、43%, 特异性为8%、75%、88%。综合 ≥ 10 mm的胃壁增厚, 且呈局限性、偏心性、强化者, 其敏感性为36%, 特异性上升到92%。

结论: 综合胃壁增厚呈局限性、偏心性且有强化等特点, 则诊断恶性胃壁增厚的特异性可上升到92%。因此, 这些患者须在近期内作进一步检查。

关键词: 消化道; 钡餐; 胃; CT; 肿瘤

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0 引言

国内外研究提示^[1-16]正常胃壁厚度在CT上为 ≤ 5 mm, 若 ≥ 10 mm则提示有胃壁肿瘤.除胃壁增厚程度外,文献中尚无鉴别良恶性病变的其他CT标准.但在临床实践中经常遇到,CT呈胃壁增厚怀疑恶性肿瘤,钡餐或胃镜检查仅为胃炎或正常.借鉴良恶性小肠病变的CT鉴别标准^[5],作者综合胃壁增厚程度与对称度、分布、强化等特点提出进一步鉴别良恶性胃壁增厚的CT标准.

1 材料和方法

1.1 材料 搜索3年(2002-2005)的CT和数字胃肠光盘,共收集到160例螺旋CT见胃壁增厚,同时又作过上消化道钡餐(UGI)检查的患者,经下列排除标准筛选后,只有40例患者进入本研究.排除标准包括:(1)只有CT平扫者;(2)CT图象不能复制者;(3)复习CT时无明确的胃壁异常,或者检查时胃扩张度不够;(4)UGI在CT前后时间超过四周者;(5)患者在CT前有胃切除手术者.本组40例CT均有胃壁增厚,UGI在CT前或后的平均间隔时间为 ± 14.3 d(范围3-28 d).40例的平均年龄为55岁(36-78岁).男性22例,女性18例,最后诊断包括UGI、胃镜、手术或/和病理检查.其中,单纯作UGI检查为14例,单作胃镜12例,UGI加胃镜6例,手术和病理检查8例.

1.2 方法 CT扫描技术:40例患者均在螺旋CT(美国GE Lightspeed QX/I 四层螺旋CT)上完成平扫和增强检查.在CT扫描之前30-45 min,口服600-800 mL的2-3%泛影葡胺,扫描前即刻服400-500 mL清水加3克发泡剂,让胃充分充盈.全部病例均用高压注射器经肘静脉注入100 mL的碘海醇300.患者取仰卧充盈位,2.5 mm层厚扫描上腹部.上消化道钡餐检查(UGI),全部患者在意大利产数字胃肠机上完成UGI双重对比检查,患者先口服发泡剂和250% (wt/vol)混悬剂,后服50% (wt/vol)混悬剂,在床上翻滚数次,摄取多体位连续充盈的图象.

CT资料复习,由CT医生在不知道最后诊断的前提下完成.CT测量和分析均在CT工作站上进行.除了壁厚 >5 mm外,还同时分析胃壁增厚的对称度(偏心性或不对称与向心性或对称性)、分布(局限性与弥漫性)、有无强化等征象.同时将良性溃疡、良性肿瘤也纳入潜在恶性.

2 结果

本组40例胃壁增厚平均值14 mm(7-65 mm), ≥ 10 mm者29例(75%), ≤ 10 mm 11例(25%).最后诊断结果:胃炎20例,裂孔疝4例,良性溃疡3例,良性胃间质细胞瘤3例,胃癌8例,正常者2例,因此,24例良性加正常2例为26例良性胃壁增厚,其余14例(包括良性溃疡、良性肿瘤3例)胃壁增厚均需进一步检查如UGI或胃镜.在这14例中,胃壁厚度平均值为23 mm(13-65 mm).在26例肯定良性或正常患者

中,15例(57%)胃壁厚度 ≥ 10 mm,11例(43%) ≤ 10 mm,26例平均厚度为10 mm(7-23 mm).

因此,在标准CT扫描条件下,胃壁增厚 ≥ 10 mm,确定恶性或潜在恶性的特异性为43%,敏感性为100%.若以20 mm厚度为标准,其特异性上升到89%,敏感性则下降到50%.在14例恶性或潜在恶性中,13例呈局限性(93%),1例呈弥漫性增厚(7%);偏心性或不对称性10例(71%),向心性或对称性4例(29%);强化6例(43%),不强化8例(57%).在良性组26例中,局限性增厚23例,弥漫性增厚3例;向心性增厚20例,偏心性6例;强化4例,不强化22例.因此,上述征象的敏感度分别为93%、71%、43%,特异性为8%、75%、88%.如果胃壁增厚 ≥ 10 mm,且呈局限性、偏心性、有强化,确定为恶性或潜在恶性的敏感度仅为36%,特异性则上升到93%.在裂孔疝4例中,胃壁厚度14 mm(7-20 mm),其中3例 ≥ 10 mm,3例有强化,占据26例良性组全部强化者.若除掉裂孔疝,强化者为肯定恶性特点,特异性达100%,在本组则为88%.

3 讨论

随着腹部CT检查的日益增多,放射科医生不仅要能发现胃壁增厚,而且要逐步增强鉴别良恶性胃壁增厚的诊断能力^[1-12].至少,要确定有哪些胃壁增厚急需进一步检查,以便排除恶性或潜在恶性肿瘤.我们以胃壁增厚的CT征象为基础,若确定 ≥ 10 mm为恶性标准,100%需要作UGI或胃镜检查,但特异性只有43%.若以胃壁厚度 ≥ 20 mm为标准,则诊断恶性的特异性为88%,敏感性只有50%.诊断恶性胃壁增厚时在胃壁增厚 ≥ 10 mm的基础上还应综合分析局限性、偏心性和强化特点.本组结果说明,对于恶性胃壁增厚,局限性增厚表现敏感但特异性非常低;偏心性和强化型胃壁增厚特异性高但敏感度很低.但若综合胃壁增厚 ≥ 10 mm,呈局限性、偏心性增厚且有强化等特点,则诊断恶性胃壁增厚的特异性达到92%.

食道裂孔疝的胃壁增厚对放射科医生鉴别良恶性是个困惑^[15],它也呈胃壁增厚 ≥ 10 mm,且有强化(两个恶性特点).应用俯卧位CT扫描,让胃底充盈完全,能够区分食道裂孔萎缩引起的假肿瘤与胃底真性肿瘤.

本组40例是以有胃壁增厚(≥ 5 mm)为选择标准,因此,不能发现多少良或恶性胃病者无胃壁增厚.再者,本文系回顾性研究,没有制定统一标准的充盈胃底的俯卧位扫描程序,再加上充盈不佳等因素会影响到文中提出的鉴定标准的制定.

总之,胃壁增厚 ≥ 10 mm这一标准诊断恶性的敏感性为100%,特异性则不到50%,若综合胃壁增厚呈局限性、偏心性且有强化等特点,则诊断恶性胃壁增厚的特异性可上升到92%.放射医生应综合分析这些特点,鉴别良恶性胃壁增厚,尤其是早期发现那些潜在恶性病变,建议临床医生在短期内让患者接受UGI或胃镜检查.

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• 消息 •

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