

·论著·

原发性肠系膜巨大淋巴结增生症的 MSCT 表现与病理对照分析

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【摘要】 目的 探讨原发性肠系膜巨大淋巴结增生症的多层螺旋 CT (MSCT) 特征。方法 回顾性分析经手术及病理证实的 8 例肠系膜巨大淋巴结增生症患者的 MSCT 表现, 分析肿块的位置、形态、大小、边界、密度及增强特点。结果 8 例肠系膜巨大淋巴结增生症中, 7 例为单发, 1 例为多发, 共检出 9 个病灶, 均为透明血管型。病灶边界均清晰, 呈类圆形或浅分叶, CT 平扫均为稍低密度影, 1 例病灶中央区见钙化; 8 例患者病灶均明显强化, 其中 6 例的 7 个病灶均匀强化, 2 例不均匀强化。4 例的 5 个病灶表现为一个较大病灶周围伴多个小结节; 8 例患者病灶周围或病灶内均见粗大血管影。结论 MSCT 对巨大淋巴结增生症的诊断及鉴别诊断具有重要价值。

【关键词】 巨淋巴结增生; 肠系膜; 体层摄影术; 螺旋计算机

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Primary mesenteric Castleman disease: MSCT findings with histopathologic correlation Zhou Cuiping, Liao Junjie, He Guohua, Yun Yongxing

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【Abstract】 Objective To review retrospectively the multislice CT (MSCT) findings in a series of eight mesenteric Castleman diseases and determine their imaging features. **Methods** The MSCT findings from eight patients with pathologically proved Castleman disease were retrospectively reviewed. The location, morphological features, size, margin, CT density, and contrast enhancement characteristics of the tumor were assessed. **Results** Among the eight patients with mesenteric Castleman disease, seven had a single mass, and one had multiple masses. All lesions were well defined and had homogeneous hyperdensity on non-enhanced imaging, except for one lesion which had a calcification in its central area. All lesions showed marked enhancement, including seven homogeneously and two heterogeneously enhanced tumors. Five tumors in four patients had satellite nodules. All lesions in eight patients had enlarged vessels around or within the mass. **Conclusion** MSCT is important to the diagnosis and differential diagnosis of primary mesenteric Castleman disease.

【Key words】 Giant lymph node hyperplasia; Mesentery; Tomography, spiral computed

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巨大淋巴结增生症 (Castleman disease) 由 Castleman 等^[1]于 1954 年首次报道并命名, 是一种介于炎症和肿瘤之间的不典型淋巴组织增生性疾病, 以淋巴结肿大为主要表现, 而临床表现没有特征性。巨大

淋巴结增生症分为局限型和多中心型两类, 全身各部位均可发生, 最常见的发病部位为胸部, 以中、后纵隔及双肺门为主, 较少发生在肠系膜^[2]。目前, 关于肠系膜巨大淋巴结增生症影像学特点的研

究报道较少,笔者收集了8例肠系膜巨大淋巴结增生症患者的多层螺旋CT(multislice CT, MSCT)资料,分析其特征,旨在提高对该病的认识和诊断准确率。

1 资料与方法

1.1 一般资料

收集惠州市中心人民医院与深圳市第三人民医院2008年至2015年经手术及病理证实的8例肠系膜巨大淋巴结增生症患者,所有患者均有完整的影像学资料,其中,男性5例、女性3例,年龄19~64岁,平均年龄 39 ± 14 岁。临床表现为腹部包块者5例,3例无症状者于体检时发现。

1.2 CT检查

8例患者采用美国GE公司LightSpeed 64层螺旋CT扫描仪进行腹部CT扫描,层厚、层间距均为5 cm,管电压120 kV,管电流40 mA,螺距0.984,扫描野370 mm,矩阵 256×256 (512×512)。先行平扫,然后静脉团注碘普罗胺(德国Bayer Schering Pharma AG公司)90 ml,增强扫描动脉期为注射对比剂后25~30 s,门静脉期为60~65 s。所有患者均于检查前签署了知情同意书。

1.3 影像学分析

由两位高年资放射诊断医师采用盲法进行影像学分析,观察病灶位置、形态、边界、密度、增强特点、强化程度、有无粗大血管影、周围有无卫星灶,如意见不统一,经讨论达成一致。肿块的形态分为圆形或椭圆形、分叶状;大小为横断位病灶最大径;边界分为清晰或模糊;以同一层面肌肉作为参照,观察巨大淋巴结增生症密度的变化,把与同一层面肌肉密度相比为相等、增高、降低者相应设为等密度、高密度、低密度病灶;强化特点为均匀或不均匀强化;强化程度为与邻近肌肉组织对比,低于肌肉强化程度为低强化,介于肌肉与血管强化程度之间为中等强化,类似于血管强化程度为明显强化。

2 结果

2.1 手术及病理结果

经手术及病理证实,所有患者病灶均位于小肠系膜,8例肠系膜巨大淋巴结增生症中,7例为单发,1例为多发,共检出9个病灶,均为透明血管

型巨大淋巴结增生症,病理上均见滤泡增生、生发中心形成和滤泡间丰富的毛细血管增生,1例患者小肠系膜多发病灶病理改变一致,4例患者单发病灶周围增大淋巴结病理为淋巴结慢性炎症。

2.2 CT表现

8例患者共9个病灶均位于中下腹部、肠系膜走行区,部分或完全被肠管或肠系膜血管包绕,周围肠管未见受累及,4例患者单发病灶的供血血管由肠系膜血管发出。所有病灶大小不一,最大径2.3~6.8 cm,平均4.0 cm。所有病灶边缘光滑,与周围结构分界清晰;6例患者病灶呈类圆形,2例呈浅分叶;3例单发患者及1例多发患者病灶表现为一个较大肿块周围伴多个小结节(卫星灶)。8例患者病灶周围或内部均见粗大血管影。CT平扫病灶呈稍低密度影,1例患者单发病灶中央见粗大钙化;8例患者增强扫描后动脉期强化明显,门静脉期持续性或进一步强化,病灶与邻近血管强化程度类似(图1~图4);6例患者的7个病灶均匀、明显强化(图1~图3),2例单发病灶在动脉期强化不均匀、内见斑片状及结节状无明显强化区,门静脉期无强化区较动脉期进一步缩小(图4);4例患者的5个病灶周围的卫星灶强化程度低于主灶。

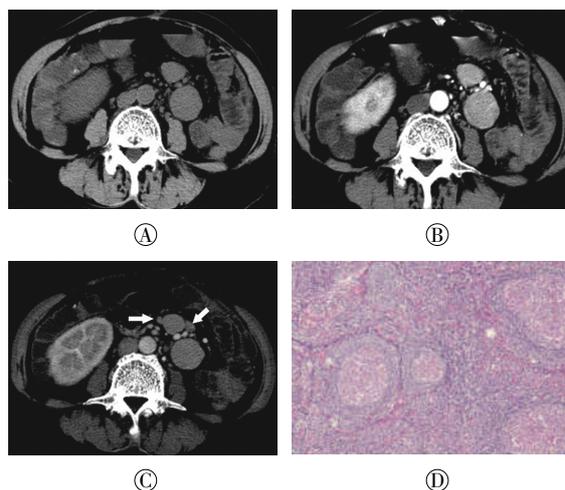


图1 肠系膜多发巨大淋巴结增生症患者的CT及病理图像 图中,A:CT平扫图像,病灶呈稍低密度影;B:增强后动脉期图像,强化明显、均匀,病灶周边及内部见粗大血管影;C:静脉期图像,持续性强化,病灶周围见卫星灶(箭头所示);D:病理切片图,苏木精-伊红染色, $\times 100$,病灶内见滤泡增生、生发中心形成和滤泡间丰富的毛细血管增生。

Fig.1 CT images and photomicrograph of a patient with two mesenteric Castleman diseases

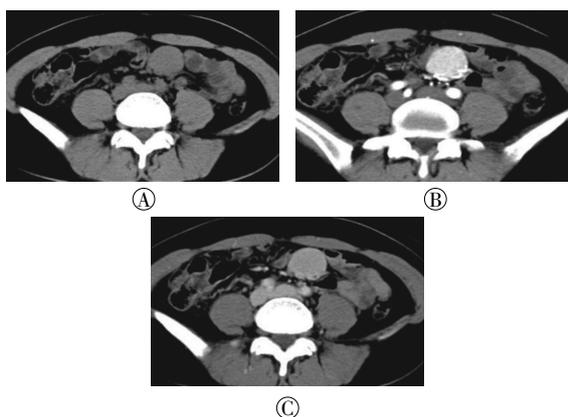


图2 肠系膜透明血管型巨大淋巴结增生症患者的CT图像图中, A: CT平扫图像, 呈稍低密度影, 密度均匀; B: 增强后动脉期图像, 强化均匀、明显, 强化程度类似血管, 病灶周围及内部见增粗血管影; C: 静脉期图像, 持续性强化。

Fig.2 CT images of a patient with mesenteric hyaline-vascular type Castleman diseases

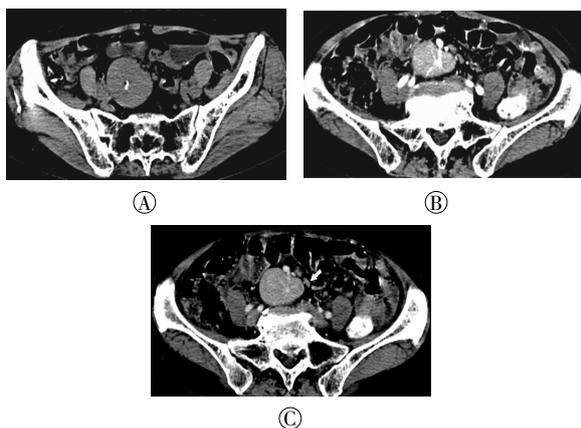


图3 肠系膜透明血管型巨大淋巴结增生症患者的CT图像图中, A: CT平扫图像, 呈稍低密度影, 病灶内见一粗大钙化; B: 增强后动脉期图像, 强化明显, 并见一粗大血管影与肠系膜血管相连; C: 静脉期图像, 持续性强化, 周围见卫星灶(箭头所示)。

Fig.3 CT images of a patient with mesenteric hyaline-vascular type Castleman diseases

3 讨论

3.1 临床病理

巨大淋巴结增生症又称 Castleman 病、巨大淋巴结增生、血管淋巴性滤泡组织增生、淋巴错构瘤、滤泡性淋巴组织细胞瘤、良性巨淋巴瘤、淋巴组织瘤样增生或巨大出血性淋巴结等。该病病因不明, 目前认为可能与感染、免疫功能异常有关。巨大淋巴结增生症的病理组织学类型分3种: 透明血管型、浆细胞型和兼有二者表现的混合型, 其中大部分为透明血管型^[9]。本研究中8例肠系膜巨大淋巴结增

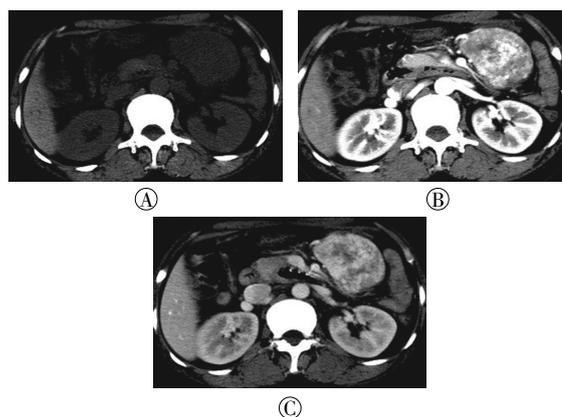


图4 肠系膜透明血管型巨大淋巴结增生症患者的CT图像图中, A: CT平扫图像, 呈稍低密度影; B: 增强后动脉期图像, 强化明显、不均匀, 周围见粗大血管影; C: 静脉期图像, 进一步强化。

Fig.4 CT images of a patient with mesenteric hyaline-vascular type Castleman diseases

生症患者镜下见滤泡增生、生发中心形成和滤泡间丰富的毛细血管增生等特征, 均为透明血管型。

3.2 定位诊断

肠系膜是腹腔的重要结构之一, CT可以全貌、清晰地显示肠系膜结构, 不难对肿瘤进行定位。Mindelzun等^[4]报道凡中下腹腔肿块, 压迫胰腺、主动脉、下腔静脉, 肠管后移, 而不侵犯邻近器官, 不能确定起源于哪个脏器, 并能与腹膜后分开, 周围与肠管完全或部分包绕而肠管本身正常, 肿块附近肠系膜增厚, 脂肪密度增高, 血管增粗、模糊或消失(模糊肠系膜征), 肠系膜上动静脉完全或部分被包绕(夹心饼征)者, 多可提示或确诊病灶位于肠系膜。本研究中病灶均位于中下腹部、肠系膜走行区, 部分或完全被肠管或肠系膜血管包绕, 周围肠管未见受累及, 并见4例患者病灶的供血血管由肠系膜血管发出, 肿块边界光滑、与腹腔各脏器分界清晰, 可以提示病灶来源于肠系膜。肠系膜巨大淋巴结增生症需与腹膜后巨大淋巴结增生症相鉴别, 上述征象可提示病灶位于肠系膜, 而以下征象可提示病灶位于腹膜后: ①腹主动脉可受压变扁或推向对侧, 下腔静脉、肾静脉受压前移, 肠系膜肿瘤则相反; ②与胰腺、肾及肾上腺、腰大肌紧贴, 并可变形或旋转, 恶性时可侵犯而与其分界不清; ③与腹壁及腹腔脏器脂肪间隙存在, 肠管呈整体向前推移^[9]。

3.3 CT表现特点与组织病理学对照

本研究中8例肠系膜巨大淋巴结增生症患者的

CT表现为病灶边缘清晰、光滑,为类圆形或浅分叶状,病灶强化明显并持续性强化,强化程度类似血管,这与文献报道一致^[3,6-8]。此种强化模式归因于病灶周围粗大的供血血管及病灶内增殖的血管^[9],本研究中8例患者的9个病灶在组织病理学上均见较多血管结构,增强CT上病灶周围或内部亦可见粗大血管影。Meador和McLarney^[3]报道肿块直径<5 cm强化均匀,>5 cm强化不均匀。而张敏等^[6]报道肿块(直径≥4 cm)增强扫描内部见结节状或裂隙状CT低密度区和MR低信号区。Zhou等^[9]证实裂隙状或放射状CT低密度为纤维组织所致,并认为大的肿块中央区出现该征象是巨大淋巴结增生症的特征之一。本研究中2例单发患者病灶CT增强后内部亦见低密度区,病灶直径分别为6.8和4.6 cm,组织学对比镜下可见较多纤维结构形成,而且这些低密度区CT增强图像门静脉期较动脉期范围减小,提示可以强化,符合纤维结构的影像学表现。王仁贵等^[10]报道病变中央区分支状钙化是巨大淋巴结增生症的特征征象,本研究9个病灶中只有1个CT见粗大钙化。局限性巨大淋巴结增生症可伴有卫星灶形成^[11],本研究中4例患者的5个病灶周围有数个卫星灶,卫星灶较主病灶强化程度低,组织病理学结果为淋巴结慢性炎性,镜下血管增生不明显。

3.4 鉴别诊断

巨大淋巴结增生症需与其他疾病引起的淋巴结肿大相鉴别,如淋巴瘤、感染性淋巴结炎、淋巴结转移等。淋巴瘤累及的肿大淋巴结强化程度低,而巨大淋巴结增生症强化明显。感染性淋巴结容易坏死,肿大程度不如巨大淋巴结增生症,而且临床上感染性淋巴结炎有感染症状亦可以提示诊断。淋巴结转移一般强化程度不如巨大淋巴结增生症,合并坏死、边缘不清等表现可以与巨大淋巴结增生症相鉴别。

肠系膜巨大淋巴结增生症强化明显,亦需与肠系膜富血管肿瘤相鉴别,如孤立性纤维瘤及胃肠外间质瘤。孤立性纤维瘤强化明显,体积小者强化均匀,体积较大者也表现为强化不均匀^[12],也可发生于肠系膜,但是周围没有卫星灶,而且病灶体积一般较巨大淋巴结增生症大。肠系膜胃肠外间质瘤可以明显强化,但大部分强化程度不如巨大淋巴结增生症,周围很少出现肿大淋巴结,且血管丰富的胃肠外间质瘤容易发生肝脏转移^[13],可以与巨大淋巴

结增生症相鉴别。

总之,原发性肠系膜巨大淋巴结增生症可以通过MSCT准确定位,其CT特征为边缘清晰、光滑,强化明显并持续性强化,强化程度类似血管,强化均匀或不均匀,伴或不伴有卫星灶。MSCT对巨大淋巴结增生症的诊断及鉴别诊断具有重要价值。

利益冲突 本研究由署名作者按以下贡献声明独立开展,不涉及任何利益冲突。

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(上接第 178 页)

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