

胸部孤立性纤维瘤的 CT 表现与鉴别诊断

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[摘要] 目的:观察胸部孤立性纤维瘤(pleural solitary fibrous tumor, PSFT)的CT表现,总结鉴别诊断策略。方法:分析24例PSFT患者CT平扫和增强征象以及病理表现。结果:均为胸腔内单发肿块,CT平扫可见软组织肿块且边缘光滑,与胸壁或纵膈间夹角呈钝角,可见胸膜轻微局限掀起,呈胸膜尾征;19例肿瘤密度相对均匀,5例瘤体较大者,肿瘤内部密度欠均匀。12例增强扫描可见不均匀强化,以肿瘤中心点状、条状、斑片状不明显强化为主;10例肿瘤不同区域可见轻度、中度、显著强化同时存在,以轻度、中度强化为主;9例肿瘤内部可见血管影像,局部血供丰富;3例瘤体增强无特殊变化。22例肿瘤边缘与周围组织界限清晰,肿瘤包膜完整,周围组织受压明显,1例肿瘤可见瘤蒂,1例肿瘤因侵犯纵膈、心包局部致使界限不清。病理结果显示24例中18例来源于脏层胸膜,6例来源于壁层胸膜。结论:PSFT的CT表现具有较高特征性,结合肿瘤定位及其与周围组织结构的关系有助于本病的鉴别诊断。

[关键词] 胸部孤立性纤维瘤;CT;影像学;鉴别

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CT manifestations and differential diagnosis of pleural solitary fibrous tumor GONG Jian, TANG Cuisong, TANG Guanyu. (Department of Radiology, Shanghai Tenth People's Hospital, Shanghai, 200072, China)

[Abstract] **Objective:** This study was designed to observe the CT manifestations of pleural solitary fibrous tumor (PSFT), and to summarize the diagnostic criteria. **Methods:** CT scan, enhancement signs and pathologic features of 24 patients with PSFT were analyzed. **Results:** All patients manifested with single-intracavitary mass, CT scan showed a soft tissue mass with smooth edges, and the angle between that and the chest wall or mediastinum was obtuse, showed the pleura raised slightly and limitedly, manifested with pleural indentation sign; the tumor density of 19 cases was homogeneous, the internal density of the tumor in 5 cases of large tumor was less homogeneous. 12 cases of enhanced scan showed uneven enhancement, mainly presented that the punctate, striped and patchy-shaped masses were not significantly enhanced in the center of tumor; the tumors of different regions could be seen mild, moderate and significantly enhanced at the same time in 10 cases, mainly characterized with mild and moderate enhancement; the internal tumor of 9 cases could be seen blood vessels imaging with abundant local blood supply; tumor body enhanced in 3 cases without special changes. Boundary between the edges of tumor and surrounding tissues was clear in 22 cases, in which the tumor capsule was complete and the surrounding tissues were compressed significantly. The tumor pedicle can be seen in 1 case, the boundary was not unclear due to violation of the local mediastinoscopy and pericardium in 1 case. Pathological results showed that among the 24 cases of PSFT, 18 cases were from the visceral pleura, 6 cases from the parietal pleura. **Conclusions:** The CT manifestations of PSFT were highly characterized, and the tumor location and its relationship with surrounding tissue structure are helpful to the differential diagnosis of this disease.

[Key words] pleural solitary fibrous tumor; CT; imaging; identification

胸部孤立性纤维瘤(Pleural solitary fibrous tumor, PSFT)是一种少见的间源性肿瘤,起源于广泛分布于人体结缔组织中的树突状间充质梭形细胞,存在一定的转移潜能^[1]。由于本病发病率较低、临床症状特异性不明显,肿瘤形态及组织学改变存在多样性,临床漏诊、误诊率较高^[2-3]。

本研究就PSFT的CT表现进行分析,总结鉴别诊断要点,提高影像诊断准确率。

1 资料与方法

2013年1月至2017年1月24例PSFT患者,均于CT

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检查后1个月内经外科手术及术后病理组织学检查明确诊断^[4]。年龄22~71岁,中位年龄45岁,病程2周~3年,中位病程14个月;患者均存在不同程度的咳嗽、咳痰、胸闷气促、胸痛等临床表现,其中1例合并反复低血糖,1例合并下肢水肿,2例合并反复手颤、出汗;患者血清癌胚抗原(CEA)、甲胎蛋白(AFP)等肿瘤标志物检查均未见异常。

使用Light Speed 16/64排螺旋CT机(美国GE公司)行CT平扫与增强检查,扫描肺尖至膈顶。平扫结束后行增强扫描,自肘前静脉,使用高压注射剂注射碘帕醇,规格370 g/L,剂量1.5 mL/kg,流速3.2~4.0 mL/s,对比剂注射后55 s行增强扫描,并对原始图像进行重建,重建层距、层厚均为2 mm^[5]。

由我院影像科2名高年资医师进行CT图像复阅,病灶密以与相邻胸大肌密度为准分为低密度、等密度、高密度共3级^[6];与相邻胸大肌强化程度相比,CT增强扫描强化特点^[7]:轻度强化(病灶强化程度与胸大肌相仿)、中度强化(病灶强化程度明显高于胸大肌)、显著强化(病灶强化程度接近胸主动脉);周边组织继发征象。此外,由2名病理科医师归纳总结病理组织学检查结果。

2 结果

2.1 CT表现

24例患者均可见胸腔内单发肿块,其中16例肿瘤分

布于左侧胸腔(左上胸腔纵隔旁2例、左前胸腔6例、左下胸腔背侧8例),其余8例肿瘤均分布于右下胸腔背侧。

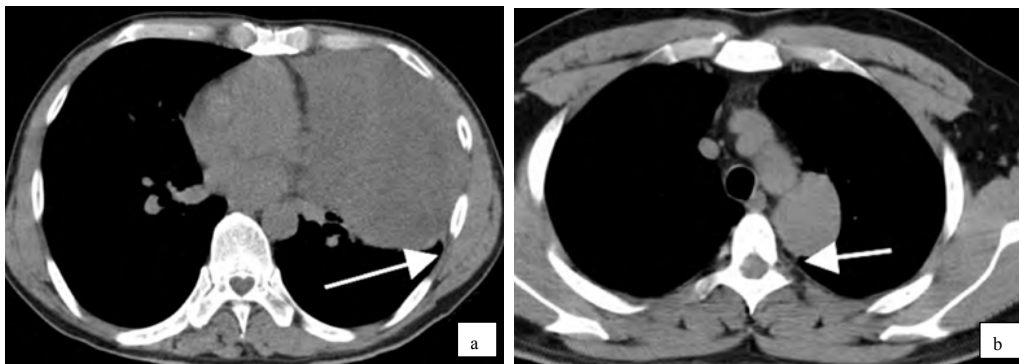
CT平扫可见软组织肿块且边缘光滑,与胸壁或纵膈间夹角呈钝角,可见胸膜轻微局限掀起,呈胸膜尾征(图1a);19例呈椭圆或近似球形,3例肿块呈浅分叶状,2例形态不规则;肿瘤最大径4.2~18.5 cm,中位最大径13.9 cm。CT平扫图像均未见明显钙化灶,其中19例肿瘤密度相对均匀(图1b),平均CT值2~53 Hu,5例瘤体较大者,肿瘤内部密度欠均匀,可见低密度灶,呈小斑片状,平均CT值范围为15~23 Hu;密度分布:低密度11例,等密度13例。

12例肿瘤增强扫描可见不均匀强化,以肿瘤中心点状、条状、斑片状不明显强化为主;10例肿瘤不同区域可见轻度、中度、显著强化同时存在,并以轻度、中度强化为主;9例肿瘤内部可见血管影像,局部血供丰富(图2a);3例瘤体增强无特殊变化。

22例肿瘤边缘与周围组织界限清晰,肿瘤包膜完整,周围组织受压明显(图2b),1例肿瘤可见瘤蒂,1例肿瘤因侵犯纵膈、心包局部致使界限不清;患者均未见胸水及胸腔淋巴结肿大侵犯。

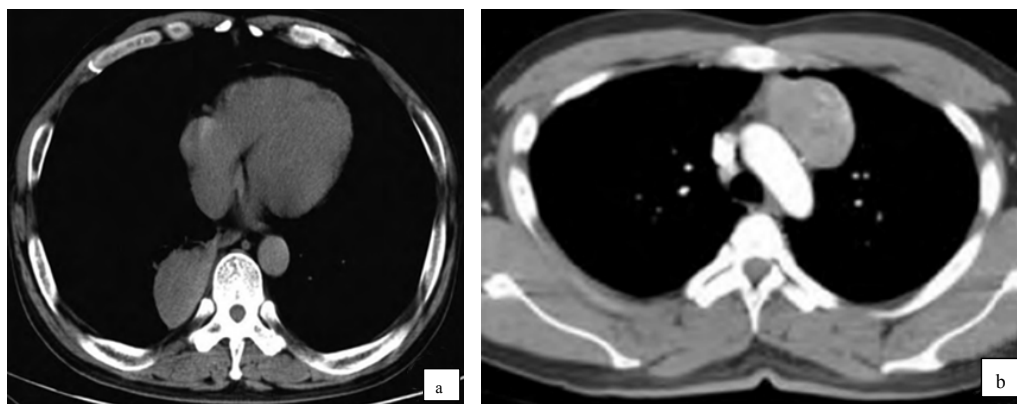
2.2 病理组织学检查结果

24例肿瘤中,18例来源于脏层胸膜,其余6例来源于壁层胸膜。肿瘤标本圆形或局部分叶状,轮廓较光整,切



左胸腔巨大肿块(直径7.5 cm),边界清晰、形态规则,左上纵隔旁类圆形等密度肿块,内部密度均匀,边缘呈胸膜尾征(箭)

图1 CT平扫



右后肋胸膜等密度影,增强呈明显不均匀强化,病灶周围可见血管影

前纵隔肿块,边界清,呈明显强化

图2 CT增强扫描

面呈灰红色或灰白色,质地较韧,周边可见厚度 1~3 mm 的纤维包膜,其中 21 例包膜完整,3 例包膜局部中断。镜下见:肿瘤细胞呈梭形、编织状,排列致密,胞核呈长梭形,少数细胞可见核仁及核分裂象;大量致密胶原纤维沉积于间质,部分区域可见间质粘液样变性或血管外皮瘤样结构形成。

3 讨论

PSFT 多起源于脏层、壁层、叶间胸膜或肺间质^[8-10]。镜下可见肿瘤的组成为梭形细胞与胶原纤维,其中梭形细胞主要分布于细胞密集区,胶原纤维主要分布于细胞稀疏区及粘液变性区^[11-12]。此外,免疫组化染色示,24 例肿瘤 Vimentin、CD34 均为阳性,而 Vimentin (+)、CD34 (+) 被认为是 PSFT 诊断的特异性指标,可据此鉴别胸膜间皮瘤与神经源性肿瘤^[13]。

PSFT 的 CT 影像学特征主要表现在:胸膜圆形或椭圆形肿块,与周围组织界限较清晰,极少发生粘连,且分叶现象与肿瘤良恶性无明显关联^[14]。既往研究认为,肿瘤瘤蒂的存在是判定 PSFT 的重要指标^[15],但本研究 24 例患者中,仅有 1 例可见瘤蒂,说明瘤蒂仅与瘤体血供有关,而非 PSFT 的诊断依据。一般而言,肿瘤体积较大者,其内部坏死组织的出现可影响组织密度,加之内部组织钙化,均造成 CT 平扫可见片状、星点状等各种无规则形态^[16];若瘤体较小,往往密度均匀且与周围组织无明显粘连、分界清晰,恶性潜能更低。CT 增强扫描所示强化表现可反映肿瘤内部胶原、基质含量及血管分布,对于 PSFT 的鉴别诊断有着一定参考价值^[17]。

PSFT 的鉴别诊断要点是 1) 神经鞘瘤多沿肋间神经分布,无论肿瘤体积大小,形态往往较为规则,而 CT 增强扫描多呈显著不均匀强化表现,且肿瘤内血管无明显强化,均与 PSFT 的 CT 平扫、增强扫描特征存在较大差别;2) 胸膜恶性间皮瘤患者以多发胸膜结节和胸膜弥漫增厚为主要病理改变,根据这一特点即可做出区分;3) 胸膜转移瘤往往伴有胸腔积液和胸壁、肋骨破坏,在判断 CT 征象的基础上,结合临床表现即可予以鉴别;4) 肺淋巴瘤的胸腔内肿块与肿块内强化血管表现与 PSFT 相仿,但前者瘤体内血管走行较为正常,与 PSFT 发育不良的肿瘤性血管存在较为明显的特征差异,而肺淋巴瘤的 CT 平扫图像往往无胸膜尾征,也可为两种疾病的鉴别诊断提供一定参考^[18]。

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