

痛风结节并胫骨远端骨质破坏1例并文献复习

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摘要

患者, 男, 30岁, 10个月前活动后发现左内踝不适; X线示: 左胫骨远端内侧见囊性病变, 其中有分隔, 边界清晰; CT平扫示: 左胫骨远端内侧见一轻度膨胀性囊样低密度影, 界清, 大小约为2.2 cm × 1.2 cm × 2.3 cm, 边缘局部密度较高, 内有分隔和气体影; MR平扫示: 左胫骨远端内侧见类圆形稍长T1长T2信号影, 其内见多发线样分隔影, 边缘清, 见浅分叶征; 影像诊断: 考虑骨巨细胞瘤或动脉瘤样骨囊肿; 超声示: 左侧小腿皮肤层及脂肪层内不均质回声区, CDFI示其内可见点状血流信号, 考虑炎性改变; 尿酸: 744 μmol/L, 病理诊断: 考虑痛风改变伴坏死。

关键词

痛风结节, 胫骨, 体层摄影术, X线计算机, 磁共振成像

A Case of Gout Nodule with Distal Tibial Bone Destruction and Literature Review

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Abstract

Patient, a male, 30 years old, found left medial malleolar discomfort after exercise 10 months ago; X-rays showed cystic lesions in the medial distal part of the left tibia, which was separated and had clear boundaries. CT plain scan showed a mild dilatant cystoid low-density shadow with clear

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boundary at the medial end of the left tibia, with a size of about 2.2 cm × 1.2 cm × 2.3 cm, high local density at the edge, and there were partitions and gas shadows. MR Plain scan showed that a circular, slightly longer T1 and T2 signal shadow was seen on the medial side of the left tibia distal, and multiple linear dividing shadows were seen inside, with clear edges and shallow lobed signs. Imaging diagnosis: giant cell tumor of bone or aneurysmal bone cyst was considered. The ultrasonography showed that there were uneven echo areas in the skin layer and fat layer of the left leg. CDFI showed that punctated blood flow signal could be seen in the area, and inflammatory changes were considered. Blood uric acid: 744 μmol/L. Pathological diagnosis: gout changes with necrosis were considered.

Keywords

Tophus, Shin Bone, Tomography, X-Ray Computer, Magnetic Resonance Imaging

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1. 引言

随着人们饮食习惯的改变,痛风越来越常见,是一种众所周知的炎症性关节炎,与高尿酸血症和组织中尿酸盐升高有关,多发生在第一跖趾关节[1],而发生于骨髓处的痛风石非常少见,易误诊为肿瘤样病变。本文报道 1 例痛风石合并胫骨骨髓骨质破坏,给予手术治疗,恢复良好。现根据相关资料分析误诊的原因及结合文献复习如下。

2. 病历资料

男,30岁,10个月前活动后发现左内踝不适,左小腿浮肿,行走后加重。专科检查:体形肥胖,体质指数 34.7 kg/m²,左下肢远端见一长约 2 × 8 cm 的外伤瘢痕,发红,浮肿,压痛,左膝部轻度肿胀,浮髌试验(+),股四头肌牵拉试验阳性。实验室检查:血尿酸:744 μmol/L (正常值为 150~417 μmol/L)。DR 片示:左胫骨远端内侧见囊性病变,其中有分隔,边界清晰。CT 平扫示:左胫骨远端内侧关节面下可见一轻度膨胀性囊样低密度影,界清,大小约为 2.2 cm × 1.2 cm × 2.3 cm,边缘硬化,其内见小条状骨样密度影及小类圆形低密度影,相应关节面局部骨皮质不连续并邻近关节间隙内小斑片状骨样密度影。MR 平扫示:左胫骨远端内侧关节面下可见类圆形稍长 T1 长 T2 信号影,大小约 2.5 cm × 1.0 cm × 1.8 cm,其内见多发线样分隔影,边缘清,见浅分叶征,周围见环形短 T2 信号影。超声示:左侧小腿前方红肿处皮肤层及脂肪层内不均质回声区,CDFI 示其内可见点状血流信号。根据影像表现诊断为骨巨细胞瘤或动脉瘤样骨囊肿。患者行左内踝痛风性骨囊肿刮除植骨术,术中见左内踝骨质破坏,周围有囊壁及硬化骨质,囊内见胶冻样组织与透亮泥沙样组织混存。病理诊断为:痛风改变伴坏死。术后安返病房,继续给予消肿、抗感染、促进恢复等对症治疗,指导其床上左下肢屈伸功能锻炼,积极预防血栓形成。

图 1 影像资料:(a)为 X 线图像,左胫骨远端内侧见囊性病变,其中有分隔,边界清晰;(b)、(c)、(d)为 CT 图像,左胫骨远端内侧囊样骨骨质破坏区、边缘硬化,内可见小条状骨样密度影及小类圆形低密度影,考虑为气体影;(e)、(f)为 MR 图像,左胫骨远端内侧关节面下见类圆形信号异常影、线样分隔影、浅分叶征;图中黑色箭头所指为病灶区;(g)为超声图像,左侧小腿前方红肿处皮肤层及脂肪层内不均质回声区,CDFI 示其内可见点状血流信号;(h)为苏木素-伊染色 × 4 图像,见痛风结节伴肉芽肿形成。

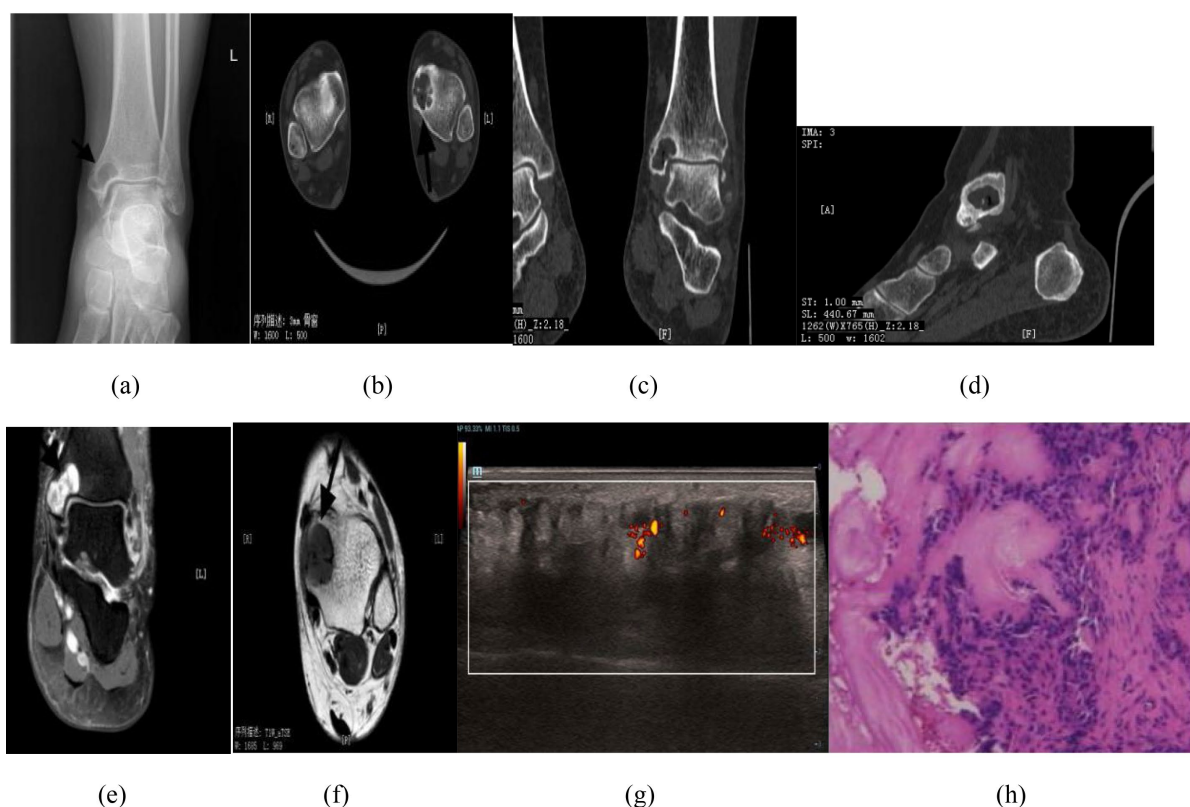


Figure 1. Image data
图 1. 影像资料

3. 讨论

痛风(gout)是由滑膜液和其他身体组织中尿酸(monosodium urate, MSU)晶体沉积引起的疼痛性关节炎,血清尿酸盐浓度高是痛风发生的最重要危险因素[2]。尿酸钠晶体沉积多见于透明软骨、肌腱鞘、关节滑囊、滑膜和皮肤,导致骨侵蚀的发生[3]。痛风发作时通常伴有不可预测的疼痛,关节肿胀和发红,以及频繁发作导致的关节损伤;男性的总体患病率高于女性,因为雌二醇的存在对尿酸晶体的合成有抑制作用[4]。典型影像表现为痛风石、骨破坏和关节间隙狭窄,晚期痛风的特征是结构性关节损伤,伴有骨破坏和局灶性软骨损伤[5]。MSU 晶体刺激巨噬细胞分泌的因子可减弱成骨细胞的分化,诱导成骨细胞促炎介质的表达和分泌,受痛风影响的关节骨侵蚀是由 MSU 晶体的直接和间接影响共同造成的[6]。

痛风的金标准诊断依赖于液体或痛风吸出液中的 MSU 晶体,然而,在临床实践中,成像技术在痛风患者的诊断中发挥了举足轻重的作用[7]。双能计算机断层扫描(DECT)具有显著的无创检测 MSU 晶体沉积的能力,具有较高的灵敏度和特异性,分别为 0.90 (95% CI 0.76 至 0.97)和 0.83 (95% CI 0.68 至 0.93) [8]。对临床尿酸高的患者有提示意义。

本病需与以下鉴别: 1) 骨巨细胞瘤是一种侵袭性的原发性良性骨肿瘤,多见于 20~40 岁的女性,好发于长骨干骺端。X 线特征为溶解性病变,边界界线分明,多无硬化边缘,病灶膨胀生长,骨皮质变薄,呈肥皂泡样改变[9]。2) 动脉瘤骨囊肿是一种局部破坏性、罕见、充满血液的良性囊性骨肿瘤,好发于青少年,最常见的部位是股骨远端、肱骨近端、胫骨近端和脊柱;影像上见可扩张的溶骨性病变,引起皮质破坏变薄[10]。3) 二羟焦磷酸钙晶体沉积症,又称假性痛风,好发于老年人,急性期以自限性的滑膜炎最为常见,慢性关节炎表现则与骨关节炎有着密切的联系,通常影响大且承重的关节,包括臀部、膝

盖或肩膀[11]。4) 类风湿性关节炎是一种影响关节的慢性自身免疫性疾病, 好发于中老年女性, 特点是受影响关节的渐进式对称炎症, 导致软骨破坏、骨糜烂和残疾[12]。

本例病例中, 误诊的原因: 1) 病灶部位及体征不典型, 位于四肢长骨, 临床不存在反复发作的病史; 2) 未能结合血尿酸升高的病史, 忽略了胫骨远端囊状破坏区周围硬化边 CT 征象; 3) 骨骺处的痛风石少见, 诊断经验不足。

痛风治疗可以分为药物治疗和非药物治疗, 药物治疗的基础是使用降尿酸治疗减少尿酸盐, 常用的药包括黄嘌呤氧化酶抑制剂, 排尿酸药和重组猪样尿酸酶, 目的是将尿酸代谢为尿素[13]。非药物治疗最重要的是优化患者的生活方式, 包括禁酒、忌吃动物的内脏、减少甜味饮料的摄入、增加乳制品的摄入[14]。

痛风可能出现各种放射性改变, 如扩张性骨病变、侵袭性、破坏性或囊性病变; 同时会出现其他的欺骗性症状, 关键是在诊断之前将所有因素联系起来[15]。在胫骨远端骨骺处的痛风结节很少见, 易误诊, 需结合病史及相关影像特点具体分析。只要及时的治疗和预防, 痛风患者预后是比较乐观的。

声 明

该病例报道已获得病人的知情同意。

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