肝癌肝脏功能的保护作用及安全性分析[J].安徽医药,2019,23(11):2279-2282.
[3] Lencioni R, Llovet JM. Modified RECIST (mRECIST) assessment for hepatocellular carcinoma[J]. Semin Liver Dis, 2010, 30(1): 52-60.
[4] Amadori M, Barone D, Scarpi E, et al. Dynamic contrast-enhanced ultrasonography (D-CEUS) for the early prediction of bevacizumab efficacy in patients with metastatic colorectal cancer[J]. Eur Radiol, 2018, 28(7): 2969-2978.
[5] Lee JY, Minami Y, Choi BI, et al. The AFSUMB consensus statements and recommendations for the clinical practice of contrast-enhanced ultrasound using sonazoid[J]. J Med Ultrasound, 2020, 28(2): 59-82.
[6] Cao X, Xue J, Zhao B. Potential application value of contrast-enhanced ultrasound in neoadjuvant chemotherapy of breast cancer[J]. Ultrasound Med Biol, 2012, 38(12): 2065-2071.
[7] Pang E, Chan A, Ho SG, et al. Contrast-enhanced ultrasound of the liver: optimizing technique and clinical applications[J]. Am J Roentgenol, 2018, 210(2): 320-332.
[8] Zheng W, Xiong YH, Han J, et al. Contrast-enhanced ultrasonography of cervical carcinoma: perfusion pattern and relationship with tumour angiogenesis[J]. Br J Radiol, 2016, 89(1065): 20150887.
[9] 周如海,赵平,袁瑞,等.超声造影在胃肠道恶性肿瘤肝转移新辅助化疗中临床疗效分析[J].医学影像学杂志,2016,26(10):1847-1850.
[10] 齐文君,廖锦堂,陈露阳,等.超声造影定量分析评价结直肠癌肝转移化疗的早期疗效[J].中国普通外科杂志,2015,24(7):1011-1016.
[11] Ueda N, Nagira H, Sannomiya N, et al. Contrast-enhanced ultrasonography in evaluation of the therapeutic effect of chemotherapy for patients with liver metastases[J]. Yonago Acta Med, 2016, 59(4): 255-261.
[12] Schirin-Sokhan R, Winograd R, Roderburg C, et al. Response evaluation of chemotherapy in metastatic colorectal cancer by contrast enhanced ultrasound[J]. World J Gastroenterol, 2012, 18(6): 541-545.
[13] 彭娟,邓倾,曹省,等.超声定量参数早期预测乳腺癌新辅助化疗效果的价值[J].中华超声影像学杂志,2021,30(6):513-518.

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·病例报道·

Ultrasonic manifestations of fibromatosis-like metaplastic carcinoma: a case report

乳腺纤维瘤病样化生性癌超声表现1例

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[中图法分类号]R445.1;R737.9 [文献标识码]B

患者女,58岁,因"发现左乳肿物20+d"来我院就诊。乳腺超声检查:左乳头内下方见一大小约2.6 cm×2.2 cm×1.9 cm团块状低回声,形态不规则,局部边界不清晰,内回声不均匀,可见少许斑点状强回声;CDFI于其内探及少许点状血流信号,周边见点条状血流信号,Adler血流分级Ⅰ级,阻力指数0.63。见图1。超声提示:左侧乳腺内团块状低回声(BI-RADS 4C类)。行超声引导下穿刺活检,病理诊断:穿刺组织大部分为增生、胶原化及硬化的纤维组织,少许导管上皮呈普通型增生。后患者行左侧乳腺癌改良根治术+腋窝前哨淋巴结活检术,术后病理检查:大部分区域细胞呈梭形,伴间质胶原化,周边见浸润性上皮样细胞巢团。免疫组化检查:ER(-),PR(-),AR(70%+),HER2(0),CK(34βE12,+),p63(+),CK5/6(+),CK14(部分+),CKpan(+),Vimentin(+),EGFR(+),p53(少数+),β-Catenin膜(+),D2-40示间质内脉管癌栓(-),Ki-67(约20%+)。见图2。结合形态学及免疫组化检查综合诊断:(左侧)乳腺纤维瘤病样化生性癌(fibromatosis-like metaplastic carcinoma,FLMC),肿瘤间质淋巴细胞浸润(约20%)。

讨论:乳腺化生性癌在临床上较为罕见,约占浸润性乳腺癌的0.2%~1.0%[1]。2019年世界卫生组织发布的乳腺肿瘤新分类中,化生性癌包括低级别腺鳞癌、FLMC、梭形细胞癌、鳞状细胞癌、伴异源性间叶分化的化生性癌、混合型化生性癌;其中FLMC是乳腺化生性癌的一种罕见亚型,仅占化生性癌的1%,常见于绝经后女性,好发于左侧乳腺,尤其是外上象限。FLMC是三阴性乳腺癌,预后较三阴性非特殊性浸润性乳腺癌相对较

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有患者均行手术治疗，可能存在一定的选择性偏倚；另外，本研究样本量相对偏少，未能对良性结节中的不同病理类型进行分类探讨，后续将扩大样本量进一步深入研究。

参考文献

[1] Cheng H, Zhuo SS, Rong X, et al. Value of contrast-enhanced ultrasound in adjusting the classification of Chinese-TIRADS 4 nodules[J].Int J Endocrinol, 2022, 2022(1): 5623919.

[2] Cao H, Fan Q, Zhuo S, et al. The value of Chinese thyroid imaging report and data system combined with contrast-enhanced ultrasound scoring in differential diagnosis of benign and malignant thyroid nodules[J].J Ultrasound Med, 2022, 41(7): 1753-1761.

[3] 中华医学会超声医学分会，浅表器官和血管学组，中国甲状腺与乳腺超声人工智能联盟.2020甲状腺结节超声恶性危险分层中国指南：C-TIRADS[J].中华超声影像学杂志，2021，30(3)：185-200.

[4] 曾敏霞，王燕，栾艳艳，等.超声造影对甲状腺实质性结节良恶性诊断价值的研究[J].中国超声医学杂志，2012，28(6)：497-500.

[5] Zhou J, Yin L, Wei X, et al. 2020 Chinese guidelines for ultrasound malignancy risk stratification of thyroid nodules: the C-TIRADS[J]. Endocrine, 2020, 70(2): 256-279.

[6] Xu Y, Qi X, Zhao X, et al. Clinical diagnostic value of contrast-enhanced ultrasound and TI-RADS classification for benign and malignant thyroid tumors: one comparative cohort study[J].Medicine (Baltimore), 2019, 98(4): e14051.

[7] Zhou X, Zhou P, Hu Z, et al. Diagnostic efficiency of quantitative contrast-enhanced ultrasound indicators for discriminating benign from malignant solid thyroid nodules[J].J Ultrasound Med, 2018, 37(2): 425-437.

[8] Qi Q, Zhou A, Guo S, et al. Explore the diagnostic efficiency of Chinese thyroid imaging reporting and data systems by comparing with the other four systems(ACR TI-RADS, Kwak-TIRADS, KSThR-TIRADS, and EU-TIRADS): a single-center study [J]. Front Endocrinol (Lausanne), 2021, 12(1): 763897.

[9] Zhan J, Ding H. Application of contrast-enhanced ultrasound for evaluation of thyroid nodules[J].Ultrasonography, 2018, 37(4): 288-297.

[10] 刘春蕊，卢晓玲，张一丹，等.甲状腺良恶性结节超声造影时间-强度曲线的差异性研究[J].临床超声医学杂志，2017，19(1)：37-40.

[11] 程红，孙红光，施燕芸，等.甲状腺乳头状癌超声造影定量参数与微血管密度相关性研究[J].临床超声医学杂志，2018，20(2)：94-97.

[12] 谷芬，刘海静，韩璐，等.超声造影成像TIC新指标对甲状腺良恶性结节的诊断价值[J].中国超声医学杂志，2016，32(12)：1057-1059.

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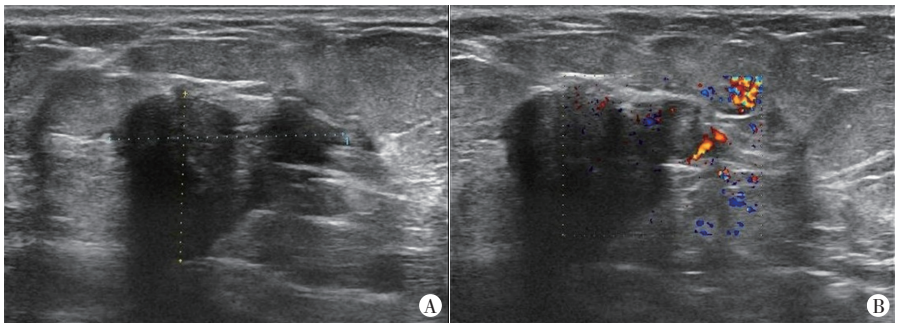
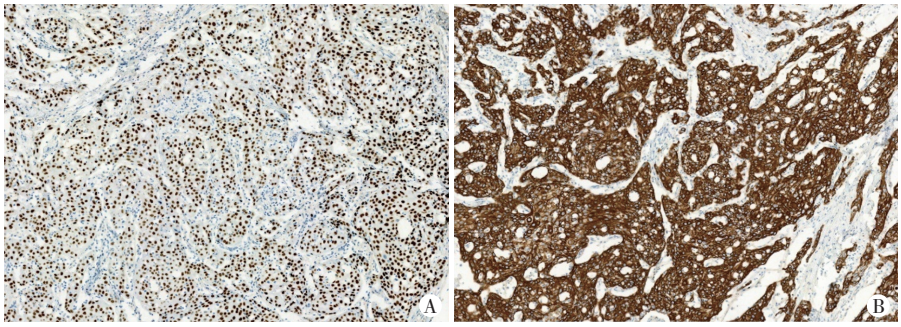


A：二维超声示团块状低回声，形态不规则，局部边界不清晰，内回声不均匀，内见斑点状强回声；B：CDFI于其周边可探及条状血流信号

图1 FLMC声像图



A：肿瘤细胞P63表达阳性；B：肿瘤细胞CK5/6表达阳性

图2 FLMC病理图(免疫组化染色，×100)

好，主要表现为局部侵袭和复发，较少发生腋下淋巴结转移。FLMC影像学多无特异性改变，研究[2]发现FLMC多呈现良性肿块特征。本病例具有浸润性导管癌的声像图特点，包括实性低回声、内回声不均匀、形态不规则、边界不清、内见斑点状钙化灶等。本病例术前穿刺活检病理结果不同于术后病理，可能与穿刺标本局限等因素有关。Dwyer和Clark[3]研究认为FLMC镜下与其他低级别梭形细胞病变的形态存在重叠，在穿刺及冰冻病理诊断时极易被误诊为良性间叶源性肿瘤或增生性病变。因此，当超声检查发现可疑恶性征象而穿刺病理显示形态温和的梭形细胞，对于此类乳腺占位性病变应考虑FLMC的可能。

参考文献

[1] Vranic S, Stafford P, Palazzo J, et al. Molecular profiling of the metaplastic spindle cell carcinoma of the breast reveals potentially targetable biomarkers [J]. Clin Breast Cancer, 2020, 20(4): 326-331.

[2] 刘维帅，郭晓宁，宫惠琳.乳腺纤维瘤病样化生性癌临床病理特征与鉴别诊断[J].诊断病理学杂志，2019，26(4)：243-246.

[3] Dwyer JB, Clark BZ. Low-grade fibromatosis-like spindle cell carcinoma of the breast [J]. Arch Pathol Lab Med, 2015, 139(4): 552-557.

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