

- [24] 陈洪, 杨世艳. 对肝脏实质性小病灶应用超声造影的早期诊断价值分析[J]. 世界最新医学信息文摘, 2019, 19(85): 186, 190.
- [25] Girshick R, Donahue J, Darrell T, et al. Region-based convolutional networks for accurate object detection and segmentation [J]. IEEE Trans Pattern Anal Mach Intell, 2016, 38(1): 142-158.
- [26] Girshick R. Fast-RCNN [C]//Proceedings of the IEEE International Conference on Computer Vision, 2015: 1440-1448.
- [27] Ren S, He K, Girshick R, et al. FasterRCNN: towards real-time object detection with region proposal networks[J]. IEEE Trans Pattern Anal Mach Intell, 2017, 39(6): 1137-1149.
- [28] 茹仙古丽·艾尔西丁. 基于深度学习的肝囊型包虫病 CT 图像分类方法研究[D]. 乌鲁木齐: 新疆医科大学, 2020.
- [29] 刘志华, 李丰军, 严传波, 等. 卷积神经网络在肝包虫病 CT 图像诊断中的应用[J]. 电子技术应用, 2019, 45(11): 17-20.
- [30] Tong ZJ, Chen YH, Xu ZW, et al. Wise-IoU: bounding box regression loss with dynamic focusing mechanism [EB/OL]. (2023-01-24) [2023-02-03]. <https://arxiv.org/abs/2301.10051>.

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• 病例报道 •

Ultrasonic manifestations of ovarian rupture in early pregnancy: a case report 卵巢妊娠早期破裂超声表现 1 例

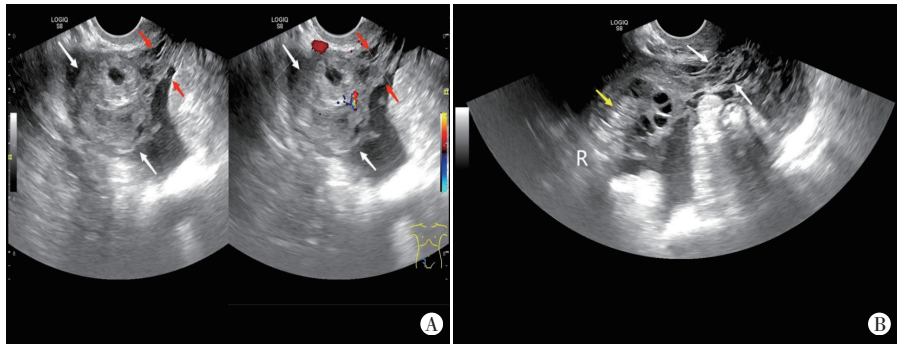
曾欣 罗纪清

[中图法分类号] R445.1; R714.22

[文献标识码] B

患者女, 28 岁, 因停经 41 d, 间断性腹痛 4 d 就诊。孕 4 产 1, 平素月经规律, 周期为 30 d, 本次停经 30 d 时出现阴道流血 1 次, 量较平时少。4 d 前无明显诱因出现下腹胀痛, 持续 1 h 好转, 后呈间断性隐痛。妇科检查: 右附件区增厚, 轻压痛, 宫颈光滑、无举痛, 宫颈闭合、未见出血。实验室检查: 尿人绒毛膜促性腺激素(HCG)阳性。经阴道超声检查: 右附件区见一大小约 22 mm×19 mm 混合回声, 边界欠清晰, 形态欠规则, 内见一大小约 9 mm×8 mm 无回声, 该混合回声侧方见一丝状相连, 连于右侧卵巢, 右侧卵巢侧方见一丝状相连, 连于混合回声(图 1A), CDFI 于混合回声内探及少许血流信号; 右侧卵巢内见部分小卵泡, 另见一窄带状稍强回声贴于卵巢表面(图 1B)。右侧混合回声周边及盆腔见一大小约 86 mm×28 mm 不规则片状稍高回声, CDFI 于其内部可探及点状血流信号。子宫直肠窝及盆腹腔见液性无回声区, 较大深度 34 mm, 超声提示: ①右附件区混合性包块, 考虑异位妊娠伴血凝块; ②盆腔积液。入院后查血 HCG: 4816.09 mU/ml。术中见: 右卵巢表面长约 10 mm 破口, 破口处见绒毛组织附着并活动性出血(图 2); 右卵巢与肠管膜粘连。术中诊断: ①右侧

卵巢妊娠; ②慢性盆腔炎并肠粘连。术后病理诊断: 右侧卵巢送检物为绒毛组织及出血(图 3)。



A: 白色箭头示右附件区混合回声; 红色箭头示右侧附件区混合回声与卵巢相连部分; B: 黄色箭头示右侧卵巢表面的窄带状稍强回声; 白色箭头示右侧卵巢与右附件区混合回声相连部分

图 1 本例患者声像图

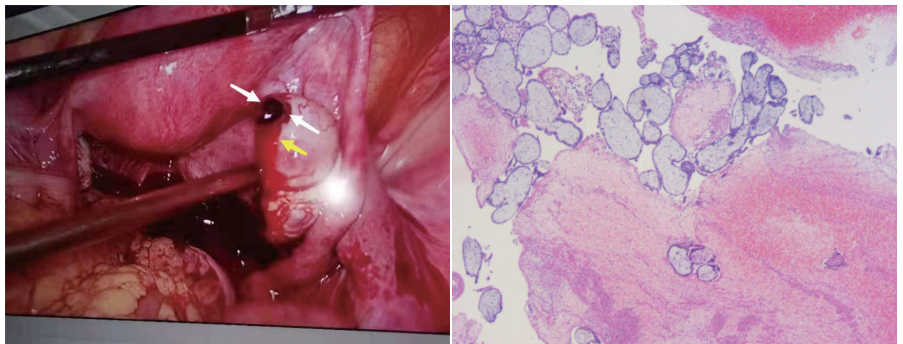


图 2 本例患者术中图像(白色箭头示右侧卵巢; 黄色箭头示血液覆盖卵巢表面)

图 3 右侧卵巢送检物病理图可见胎盘绒毛及出血(HE 染色, ×100)

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- [18] Haland TF, Almaas VM, Hasselberg NE, et al. Strain echocardiography is related to fibrosis and ventricular arrhythmias in hypertrophic cardiomyopathy [J]. *Eur Heart J Cardiovasc Imaging*, 2016, 17(6):613–621.
- [19] Vachalcova M, Valočík G, Kurečko M, et al. The three-dimensional speckle tracking echocardiography in distinguishing between ischaemic and non-ischaemic aetiology of heart failure [J]. *ESC Heart Fail*, 2020, 7(5):2297–2304.
- [20] Spartera M, Damascelli A, Mozes F, et al. Three-dimensional speckle tracking longitudinal strain is related to myocardial fibrosis determined by late-gadolinium enhancement [J]. *Int J Cardiovasc Imaging*, 2017, 33(9):1351–1360.
- [21] Wang J, Zhang Y, Zhang L, et al. Assessment of myocardial fibrosis using two-dimensional and three-dimensional speckle tracking echocardiography in dilated cardiomyopathy with advanced heart failure [J]. *J Card Fail*, 2021, 27(6):651–661.
- [22] Mahdiu ME, van der Bijl P, Abou R, et al. Myocardial work, an echocardiographic measure of post myocardial infarct scar on contrast-enhanced cardiac magnetic resonance [J]. *Am J Cardiol*, 2021, 151(1):1–9.
- [23] Cui C, Li Y, Liu Y, et al. Association between echocardiographic non-invasive myocardial work indices and myocardial fibrosis in patients with dilated cardiomyopathy [J]. *Front Cardiovasc Med*, 2021, 8(1):704251.
- [24] Galli E, Vitel E, Schnell F, et al. Myocardial constructive work is impaired in hypertrophic cardiomyopathy and predicts left ventricular fibrosis [J]. *Echocardiography*, 2019, 36(1):74–82.
- [25] Gonçalves AV, Rosa SA, Branco L, et al. Myocardial work is associated with significant left ventricular myocardial fibrosis in patients with hypertrophic cardiomyopathy [J]. *Int J Cardiovasc Imaging*, 2021, 37(7):2237–2244.
- [26] Vejdani-Jahromi M, Freedman J, Nagle M, et al. Quantifying myocardial contractility changes using ultrasound-based shear wave elastography [J]. *J Am Soc Echocardiogr*, 2017, 30(1):90–96.
- [27] Villemain O, Correia M, Mousseaux E, et al. Myocardial stiffness evaluation using noninvasive shear wave imaging in healthy and hypertrophic cardiomyopathic adults [J]. *JACC Cardiovasc Imaging*, 2019, 12(7 Pt 1):1135–1145.
- [28] Cvijic M, Bézy S, Petrescu A, et al. Interplay of cardiac remodelling and myocardial stiffness in hypertensive heart disease: a shear wave imaging study using high-frame rate echocardiography [J]. *Eur Heart J Cardiovasc Imaging*, 2020, 21(6):664–672.
- [29] Pislariu C, Alashry MM, Thaden JJ, et al. Intrinsic wave propagation of myocardial stretch, a new tool to evaluate myocardial stiffness: a pilot study in patients with aortic stenosis and mitral regurgitation [J]. *J Am Soc Echocardiogr*, 2017, 30(11):1070–1080.
- [30] 魏丽群, 李一丹, 丁雪晏, 等. 心肌弹性成像对高血压左心室不同构型患者心肌僵硬度的评价 [J]. *中华医学超声杂志(电子版)*, 2021, 18(2):128–134.

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讨论:卵巢妊娠属于异位妊娠的一种,发病率低,约占异位妊娠的 2.4%^[1],病因尚未明确,可能与既往附件手术、盆腔炎症性疾病、子宫内膜异位症、使用宫内节育器及辅助生殖技术等有关^[2]。本例患者有多次妊娠、人流史及肠粘连,故推测病因为盆腔炎症。根据妊娠时间长短、胚胎是否存活、孕囊是否破裂可将卵巢妊娠分为未破裂的囊胚型、不均质包块型和破裂的回声杂乱型,本例患者属于破裂的回声杂乱型。文献^[3]报道超声对未破裂的卵巢妊娠有一定诊断价值,但对卵巢妊娠破裂后形成的混合回声包块,因与输卵管妊娠破裂后形成的包块声像图极其相似,鉴别诊断较为困难。本例患者停经 41 d,腹痛发生时间为停经 37 d,推测在停经 37 d 即发生了卵巢妊娠破裂,与既往文献^[1]报道的卵巢妊娠停经时间短于输卵管妊娠停经时间相符。本例患者以腹痛为首发症状,腹痛为间断性隐痛,症状较轻微,推测与停经时间短,孕囊生长较小有关。卵巢表面仅有一层致密结缔组织,缺乏妊娠生长所需的肌纤维组织,绒毛极易侵蚀血管,发生卵巢妊娠早期破裂。本例患者卵巢妊娠破裂后,形成包含有妊娠组织、液体、凝血块的混合回声包块,与右侧卵巢相连,超声探及混合回声包块与卵巢间为丝状相连,呈“藕断丝连征”;右侧卵巢内见部分小卵泡,卵巢表面另见一窄带状稍强回声,当时未引起重视,后于术中发现卵巢上有

破裂口,见鲜红的血液流到卵巢表面,结合超声图像推测卵巢表面的窄带状稍强回声为血液流过卵巢表面形成的,因此右侧卵巢仅显示部分小卵泡,此现象称为“卵巢表面血液覆盖征”。该征象为诊断卵巢妊娠破裂提供了依据。而输卵管妊娠破裂形成的包块超声表现为:卵巢一般完整,无“藕断丝连征”和“卵巢表面血液覆盖征”,这应该是基于异位妊娠诊断后,卵巢妊娠破裂与输卵管妊娠破裂的另一个鉴别要点。

总之,超声是卵巢妊娠早期破裂的首选筛查手段,超声检查时除常规观察包块外,还需对一些细节如卵巢表面是否有“血液覆盖征”、卵巢是否完整、是否有“藕断丝连征”等仔细观察,可为卵巢妊娠破裂与输卵管妊娠破裂的鉴别诊断提供依据。

参考文献

- [1] 齐洪伟,范碧瑜,孙鹤桐,等. 卵巢妊娠与输卵管妊娠的临床特点比较分析 [J]. *中外女性健康研究*, 2018, 26(13):99, 151.
- [2] 李红义,蔡小蓉,何翔. 卵巢妊娠的病因学及诊断治疗 [J]. *中国计划生育和妇产科*, 2022, 14(5):11–13.
- [3] 尹茵,徐萌,王月美,等. 卵巢妊娠的超声诊断及鉴别诊断 [J]. *医学影像学杂志*, 2021, 31(7):1259–1261.

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