中国医学影像技术
CHINESE JOURNAL OF MEDICAL IMAGING TECHNOLOGY

陈敏华,严昆,戴莹,沈理,姜晓龙,尹珊珊.灰阶超声造影新技术对肝肿瘤诊断及射频治疗的应用价值[J].中国医学影像技术,2004,20(3):326~330

灰阶超声造影新技术对肝肿瘤诊断及射频治疗的应用价值

New gray scale contrast ultrasound technique in liver neoplasms diagnosis and radiofrequency ablation application

DOI:

中文关键词: 超声检查 造影剂 肝肿瘤 射频消融

英文关键词:Ultrasonography Contrast agent Liver neoplasm Radiofrequency ablation

基金项目:

作者	单位
陈敏华	北京大学临床肿瘤学院 北京肿瘤医院超声科,北京 100036
严昆	北京大学临床肿瘤学院 北京肿瘤医院超声科,北京 100036
戴莹	北京大学临床肿瘤学院 北京肿瘤医院超声科,北京 100036
沈理	北京大学临床肿瘤学院 北京肿瘤医院超声科,北京 100036
姜晓龙	北京大学临床肿瘤学院 北京肿瘤医院超声科,北京 100036
尹珊珊	北京大学临床肿瘤学院 北京肿瘤医院超声科,北京 100036

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中文摘要:

目的 观察新型超声造影剂SonoVue及实时灰阶造影成像技术(CnTI)对肝脏肿瘤的灌注过程及回声变化规律,探讨其对肝脏恶性肿瘤诊断及射频消融治疗的应用价值。**方法** 35例超声不能完全明确诊断或漏诊的肝脏占位患者,26例经手术或穿刺病理确诊,9例为增强CT、核磁共振等临床资料证实;原发性肝癌23例,肝转移癌5例,良性病变7例。原发性肝癌中14例为射频治疗前检查。 **结果** 原发性肝癌23例均发生动脉早期强化,21例(91.3%)实质期呈快速消退,即"快进快出"型;另2例＜2 cm的高分化小肝癌则消退缓慢。肝转移性肿瘤5例表现多样,呈动脉期或门脉期环状强化或不同程度强化,消退快慢不一。肝血管瘤3例动脉期瘤内无强化,门静脉期呈向心性填充增强,持续数分钟后消退;余4例良性病灶变化不典型。射频组14例26个HCC瘤灶中9个肿瘤(34.6%)可显示荷瘤血管;12个灶(46.1%)造影后显示原病灶范围增大,其中边界不清晰及无晕征的肿瘤增大明显,此结果有助于确定射频消融范围。**结论** 新型超声造影技术对肝脏占位病变的定性诊断灵敏而有效,显示肿瘤实际大小、数目和发现微小病灶等可极大地提高超声对肝脏占位病变的诊断价值,并为射频适应征的选择和治疗方案的制定提供了依据。

英文摘要:

Objective To investigate the role of new contrast agent (SonoVue) and real time gray-scale contrast tuned imaging (CnTI) in the evaluation of the perfusion and echogenicity of liver neoplasms and to discuss the diagnostic value and radiofrequency ablation application. **Methods** Thirty-five patients with unconfirmed liver neoplasms were enrolled in our study. Nine of them were diagnosed clinically, while the other 26 cases with pathological evidence through surgery or needle biopsy. Twenty-three were hepatocellular carcinoma (HCC), 5 were liver metastases, and 7 were benign diseases. Fourteen of the 28 malignant cases were examined before radiofrequency ablation(RFA) of the liver neoplasms. **Results** Among the 23 cases of typical HCC, 21 (91.3%) presented with early artery enhancement and immediate wash-out, while the other 2 cases of small (＜2 cm) hyper-differentiated HCC washed out slowly. The enhancement pattern of 5 liver metastastic cases was diverse, including peripheral or various degree enhancement in the arterial or portal phase with slow or fast wash-out. The 3 cases of haemangioma were enhanced centripetally in portal phase and washed out after several minutes without arterial enhancement and the other 4 benign cases without typical enhancement. Twenty-six lesions of 14 patients were observed with contrast ultrasound before RF ablation, 9 lesions (34.6%) of which showed feeding vessels, 12 lesions (46.1%) tended to be larger, especially those with unclear margins and without halo sign. This might help to recognize the ablation safe margin. **Conclusion** The new contrast ultrasound technique is sensitive and effective in diagnosing liver neoplasms. Recognizing the size and number of lesions and detecting minute foci greatly improved the value of contrast ultrasound in diagnosis of liver neoplasms. It will also help to choose the indicator and establish the protocol of local treatment methods.

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地址：北京市海淀区北四环西路21号大猷楼502室 邮政编码：100190 电话：010-82547901/2/3 传真：010-82547903

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