Editorial

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Contrast-enhanced ultrasonography represents a very good method in the assessment of liver masses

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Contrast-enhanced ultrasonography (CEUS) is already a well-established investigation technique. A number of European studies published in specialty literature show the high performances of this method in detecting and describing tumoral masses [1-5]. The most significant applications that has drawn attention in the last years are in the diagnosis of liver masses. In this number of Medical Ultrasonography several interesting aspects about this method are discussed.

The study "Contrast-enhanced Ultrasound for the diagnosis of liver hemangiomas in clinical practice" performed by Sirli et al. [6] shows the role of contrast-enhanced ultrasonography in the diagnosis of liver hemangiomas. On a large number of cases, including 413 liver masses, the authors demonstrate that in 64 situations (15.5%) typical findings for liver hemangioma were identified, thus avoiding other more invasive or costly diagnostic procedures. MRI was necessary in order to clarify the diagnosis in only 9 cases. The authors therefore conclude that CEUS has a high level of confidence, reaching 91.3% in the diagnosis of hemangiomas. Moreover, the method is able to identify hemangiomas with higher accuracy than conventional ultrasonography due to the characteristic uptake of these lesions.

The paper of Dănilă M et al. [7], from the same centre, titled "The value of contrast enhanced ultrasound in the evaluation of the nature of portal vein thrombosis" analyzes the aspects of portal vein thrombus depending on its benign or malignant ethiology. The study includes 38 patients with US-diagnosed portal vein thrombosis. The malignant nature of the thrombosis was demonstrated in 23 cases. CEUS was conclusive in 97.2% of the patients based on thrombus uptake criteria during the arterial phase. The author concluded that CEUS is a reliable technique for the characterization of the portal vein thombosis, being conclusive for the differentiation benign and malignant thrombus.

The study of Martie A et al. [8] – "The value of Contrast Enhanced Ultrasound in the evaluation of the nature of portal vein thrombosis" completes the applications of CEUS presented in this number of Medical Ultrasonography. The authors demonstrate on a homogenous group of 100 patients (with a total number of 148 nodules) a typical behavior of tumoral uptake, in agreement with the EFSUMB guides, in 75.7% of the cases. CEUS is therefore able to recognize liver tumors that require a biopsy, based on their response in the arterial phase. The paper also underlines the error risks represented by false positive and false negative diagnosis, in the case of which further investigations are required.

The three studies published in this issue prove the utility of this recently introduced diagnostic technique. The area of application is extremely important and the results are conclusive. At the same time, the exploitation of a homogenous patient population by the three groups, with different objectives, is a good example of the way quality clinical studies should be performed.

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