LIU-STAIN QUICK CYTODIAGNOSIS OF ULTRASOUND-GUIDED FINE NEEDLE ASPIRATION IN DIAGNOSIS OF LIVER TUMORS

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Background and aim: To establish a quick diagnosis of liver tumors by combining ultrasound-guided fine-needle aspiration (US-FNA) and quick Liu (Riu) stain cytodiagnosis in clinical practice.

Material and Methods: A total of 232 patients underwent US-FNA for liver tumors (size range 1-16 cm). The US-FNA specimens were smeared onto glass slides (average 3-5 slides). One to two slides were stained by Liu stain and read by the operator himself immediately (within 30 minutes). The remaining 2-3 slides were sent to the pathology department for H&E and/or Papanicolaou staining. The remaining small, cohesive tissue fragments were collected for cell block histology. The result of quick Liu-stain cytodiagnosis was confirmed by the cytopathological diagnosis from the pathological report.

Result: Excluding 4 inadequate specimens, 228 patients were enrolled. Among the 228 patients, the quick cytodiagnosis revealed 142 malignancies, 4 suspicious malignancies, 81 benign lesions and one inadequate specimen. Four suspicious malignancies were 2 hepatocellular carcinomas (HCC) and 2 other malignancies. One inadequate specimen was determined as adenocarcinoma by cytopathological diagnosis. A total of 146 quick cytodiagnoses were labeled as malignant. The cytopathological diagnosis revealed 152 malignancies and 76 benign lesions. Among them, 143 malignancies and 76 benign lesions by quick cytodiagnosis were corrected. The overall quick cytodiagnosis correct rate was 96.1% (143+76/228). Excluding the one inadequate specimen, the accuracy of quick cytodiagnosis was 96.5% (219/227), and the sensitivity, specificity, positive and negative predictive values were 97.9%, 93.8%, 96.6% and 96.2%, respectively.

Discussion/Conclusion: Quick Liu-stain cytodiagnosis is a fast, convenient, and effective method for hepatologists in clinic practice to diagnose liver tumors.

Key wards: Liver tumor; cytology, fine-needle aspiration