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Observational Study

Study on the value of serum miR-106b for theearly diagnosis of hepatocellular carcinoma

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1 What did this study explore?

Answer：This study aims to analyze the incidence of hepatocellular carcinoma (HCC) in a population that underwent health checkups and had high serum miR-106b levels.**2 How did the authors perform all experiments?**

Answer：A total of 335 subjects who underwent checkups in Digestive and Liver Disease Department our hospital were randomly selected. RT-PCR was used to detect the level of miR-106b in serum samples. Laboratory and imaging examinations were carried out to confirm the HCC diagnosis in patients who had a >2 fold change in miR-106b levels. Ultrasound-guided biopsy was also used for HCC diagnosis when necessary. On this basis, the clinical data of these subjects including history of hepatitis virus infection, obesity, long-term history of alcohol and staging of HCC were collected. Then, the impact of these factors on the level of miR-106b in serum was analyzed. Furthermore, ROC curve was drawn to evaluate the diagnostic efficacy of miR-106b for HCC.

3 How did the authors process all experimental data?

Answer：Measurement data were expressed as mean ± standard deviation ( ). Subjects were divided into two according to clinical examination results: early HCC group and non-HCC group. T-test was used to compare the basic clinical data between the two groups. On this basis, the curve derived from the patient (ROC curve) was used to evaluate the diagnostic efficacy of miR-106b. $P<0.05$ was considered statistically significant.

4 How did the authors deal with the pre-study hypothesis?

Answer：Previous studies showed that the relative serum miR-106b expression of patients with HCC was more than double in most studies, which meant that it had the potential to be a biomarker of HCC. In the study, we randomly detected the miR-106b level of medical examiners. Through the study, the significance of miR-106b levels in the diagnosis of HCC was further analyzed, and it could provide more evidence-based medicine for the clinical application of miR-106b.

5 What are the novel findings of this study?

Answer：The random sampling survey shows that serum miR-106b level is a valuable diagnostic marker for HCC. However, the diagnostic threshold value needs to be further researched.