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Diagnostic value of mp-US of the non-alcoholic fatty liver disease in the patients with type 2 diabetes mellitus

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### Aims and objectives

According to the International Diabetes Federation (IDF) there are about 425 million people with diabetes and 352,1 million people with impaired glucose tolerance in the world. Type 2 diabetes mellitus (T2DM) is 90% among all adults with diabetes [1]. It is known that nonalcoholic fatty liver disease (NAFLD) is one of the causes of disability and mortality in patients with T2DM. In Western countries NAFLD affects 17-46% of adults. The stages of NAFLD are steatosis, steatohepatitis (NASH) and steatotic cirrhosis. Cardio-vascular and cerebro-vascular risks and...

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### Methods and materials

Our research was conducted on the base of Kyiv clinical endocrinological centre from 2015-2017. 111 patients with T2DM of both sex (81 women and 24 men) at the age 18-79 were investigated. The inclusion criteria of the research were: presence of T2DM, age from 18 years, body mass index 25 kg/m<sup>2</sup> and more with metformin as monotherapy or in combination with other hypoglycemic drugs. The criteria of exclusion were: presence of markers to the viral hepatitis B and C; alcohol and drug abuse; pregnancy; patients...

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### Results

The age of patients with T2DM and NAFLD was 57,7±8,6 years; duration of T2DM 10,2±5,99 years. In B-mode the biometry and assessment of echotexture of such organs as liver, gall bladder, pancreas, spleen, peritoneum, lymph nodes and vessels were performed. NAFLD was diagnosed according to the Hamaguchi criteria. 99 patients (91,4%) matched these criteria. Right lobe was enhanced in 104 patients (99%) and in 31 patients (29,5%) the size of left lobe was normal. Chronic pancreatitis was diagnosed in 104 patients (99%). All the patients...

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### Conclusion

The CAP and TE on the Fibroscan are widely used as noninvasive methods for evaluation of liver steatosis and fibrosis [11, 12]. Performing of step by step algorithm of mp-US in real time includes comprehensive investigation of abdomen in B-mode, evaluation of the stage of steatosis quantitatively, performing of LS measurement, HRI and PLI, Doppler simultaneously. Mp-US is economically affordable. 2D-SWE is performed with the help of B-mode navigation which increases diagnostic accuracy [15]. 2D-SWE is not limited abundantly presence of subcutaneous fat and...

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## References

1. Atlas IDF 2017. <http://www.diabetesatlas.org/resources/2017-atlas.html>. 2. EASL-EASD-EASO Clinical Practice Guidelines for the management of non-alcoholic fatty liver disease. *J Hepatol* 2016;64:1388-1402. 3. Sethi P, Bhatia P, Gubta N et al. Liver biopsy: Small procedure with large complications. *Anaesth Pain&Intensive Care* 2016;20(1):111-112. 4. Hamaguchi M., Kojima T., Itoh Y. et al. The Severity of Ultrasonographic Findings in Nonalcoholic Fatty Liver Disease Reflects the Metabolic Syndrome and Visceral Fat. *American J Gastroenterol* 2007;102:2708–2715. 5. Chauhan A, Sultan RL, Furth L. et al. Diagnostic accuracy of hepatorenal...

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