Do patients after bariatric surgery change their physical activity habits? A prospective one-year follow-up study

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Aim: The purpose of this study was to assess whether patients have changed their physical activity habits one year after the bariatric surgery.

Introduction: Vast majority of obese patients have developed their condition by overeating and insufficient physical activity. Severe obesity leads to problems with locomotor system and constraint movability, resulting in closure of the vicious circle of gaining weight. Bariatric surgery is an effective weight loss method, but it is still unclear whether this procedure influences modification of physical activity routine.

Methods: 54 patients (55.56% females, n = 30) who underwent bariatric surgery at 2nd Department of General Surgery JU MC in Cracow, Poland from November 2015 to June 2016 were enrolled to this prospective study. Mean age, BMI and absolute waist circumference of participants were respectively: 43.6 ± 12.2 y.o., 45.94 ± 6.35 kg/m$^2$ and 128.39 ± 13.45 cm (female), 146.9 ± 17.21 cm (male). One day before the procedure and one year later participants were asked to complete two standardized questionnaires: Paffenbarger Physical Activity Questionnaire and WHO Global Physical Activity Questionnaire, on the basis of which average physical activity in metabolic energy equivalents (MET-minutes) per week has been estimated.

Results: One year after surgery MET-minutes has increased over 14 times (Me:299.75, Q1–Q3:225.78–358.38 vs. Me:4339.85, Q1–Q3:1590.6–7827.1, p < 0.00001). Average time sitting or reclining has reduced from 480 to 300 min per day (p = 0.00118). Mean pace of walking has changed from <3.2 km/h to average 3.2–4.8 km/h (p = 0.00406). Participants were also asked to rate on visual analogue scale their level of exertion during normal activities. This parameter has decreased from mean 5 (equivalent of strong effort) to mean 2.5 (equivalent of weak effort) (p = 0.00004).

Conclusion: Before the procedure none of participants has achieved recommended by WHO weekly level of 600 MET-minutes and after surgery 81% of them have exceed it. This data have shown significant positive changes in physical activity in patients who underwent bariatric surgery.

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Comparison of liver biopsy and non-invasive APRI test in assessing the stage of liver fibrosis in patients with chronic HCV infection

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Aim: The aim of this study was to evaluate the performance of non-invasive APRI score in predicting significant fibrosis and cirrhosis in patients with chronic HCV infection who underwent liver biopsy.

Introduction: Determining the stage of liver fibrosis is essential in managing patients with chronic hepatitis C virus. In chronic HCV infection, liver biopsy is the gold standard method for assessing stage of liver fibrosis, but it is invasive with potential complications. Non-invasive markers have been proposed and APRI score (aspartate aminotransferase (AST)-to-platelet ratio index) has been shown as a simple and inexpensive marker of liver fibrosis.

Methods: This retrospective study included 142 patients with chronic hepatitis C who had undergone liver biopsy from January 2013 to December 2015. Liver fibrosis was staged according to METAVIR (F0–F4) scoring system. The diagnostic performances of APRI score in predicting significant fibrosis (F2–F4) and cirrhosis (F4) were evaluated and compared by ROC curves.

Results: Fifty-three (37.3%) patients had significant fibrosis and 18 (12.7%) had cirrhosis. The areas under the ROC curve of APRI for predicting significant fibrosis and cirrhosis were 0.76 and 0.81. Using recommended cut-off values for APRI test, significant fibrosis could be identified in 26% and cirrhosis in 22% patients, but specificity for significant fibrosis was 88% and for cirrhosis 91%. Results have also shown that lower platelets count in our patients is associated with higher stage of fibrosis (p < 0.0001).

Conclusion: APRI test shows low sensitivity and high specificity in the distinction between mild and significant fibrosis, and it shows good sensitivity in the evaluation of patients without cirrhosis and excellent specificity in patients with cirrhosis. Non-invasive biochemical tests and scores should be used only as additional criteria in differentiating the stage of liver fibrosis in chronic HCV infection, along with other non-invasive methods.

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Characteristics of patients with diagnosed chronic fungal rhinosinusitis surgically treated at the Clinic for otorhinolaryngology, Clinical centre of Vojvodina, in the past five years

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Aim: To determine the characteristics of patients with chronic fungal rhinosinusitis surgically treated at the Clinic for Otorhinolaryngology, Clinical Centar of Vojvodina, from 2011 to 2016.