**DIABETIC GALLBLADDER, DYSPEPSIA AND METABOLIC EFFECTS**

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**The** **purpose** of the study was to determine the functional state of the gallbladder (GB) in patients with type 2 diabetes mellitus (T2DM) in combination with metabolic syndrome (MS).

**Methods.** 40 patients with T2DM and obesity of I-II degree were examined as well as 20 healthy volunteers. Ultrasonography, dynamic echocholecystography and duodenal intubation were performed. The motor function of GB was assessed by emptying coefficient (Kempt=(Vс)/V0х100%) and the index of contractility (IC=Vmax/Vmin). Lipid and carbohydrate metabolism was assessed.

**Results.** The following signs of GB hypotension were revealed: increase of GB initial volume to 80.2±1.1 cm3 (in the control group – 25.9±1.9 cm3) (P<0.05); increase of GB hypokinesia - reduced Kempt of GB on 30th minute of investigation (0.6±0.1 vs 49.2±2.5 (P<0.05)), on 45th minute (7.8±0.3 vs 61.2±2.7 (P<0.05)) and on 60th minute (17.2±0.4 vs 67.4±2.4 (P<0.05)). The reduction of GB propulsive function was confirmed by the increase of GB final volume to 66.3±0.9 cm3 vs 8.1±0.8 cm3, increase of the GB latent period duration to 28.2±0.2 minutes vs 12.6±0.5 minutes and reduced IC to 1.21±0.1 vs 3.1±0.3 (P<0.05). Hypotonic-hypokinetic type of GB dyskinesia was confirmed by a reduction of GB wall thickness (2-3 mm) and a frequent presence of GB twist phenomenon. Typical clinical manifestations included dyspeptic signs, asthenic syndrome and silent course of the disease. The presence of dyskinesia in patients with T2DM and MS was accompanied by significant fluctuations of blood glucose levels during the day (the phenomenon of glycemic swings), indicating the unsatisfactory state of carbohydrate control. Also, these patients showed signs of dyslipidemia, which included increased content of TC, TG and LDL in comparison to control data.

**Conclusions.** Patients with T2DM and MS show signs of GB dyskinesia with dilatation and reduced GB contractile function that are associated with disorders of carbohydrate and lipid balance.