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**Gene expression changing after bariatric surgery in morbid obese patients and type 2 diabetes remission**

Taiebeh Mohammadi Farsani, Gholamreza Mohammadi Farsani and Ali Kabir  
Tehran University of Medical Sciences, Iran

**B**ariatric surgery is the most useful method for the treatment of obesity and type 2 diabetes. It is proposed that expression changes of many genes, after bariatric surgery, may be implicated in postoperative type 2 diabetes remission. In this study we reviewed some important studies that focused on changes in gene expression in morbid obese subjects with type 2 diabetes after bariatric surgery. In a pilot study, the expression of some genes implicated in lipid metabolism, obesity and/or type 2 diabetes changed after bariatric surgery. Park et al (2006) showed the decrease in some genes expression would be expected to improve insulin signaling. A variety of acute-phase reactants increased in subjects with obesity and type 2 diabetes; while, some of them such as CAMP and alpha defensin 1/3 have decreased in women following bariatric surgery from 55 to 60%. After bariatric surgery, expression of regenerating pancreatic islet-derived protein-encoding genes in the jejunum enhanced and affected on postoperative type 2 diabetes remission by playing an endocrine function. Decreased expression of microRNA-448 and increased expression of sirtuin 1 associated to increase of insulin sensitivity. So that these can serve them as prognostic indicators for obese type 2 diabetes patients after laparoscopic bariatric surgery. Our study highlights the increase or decrease of important genes expression associated to type 2 diabetes remission of morbid obesity after bariatric surgery. Assessment of these changes and associating with type 2 diabetes remission can perhaps help to understand molecular mechanisms involved in this process.

tmfarsani@gmail.com

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