

Circulating microRNA associated to different stages of liver steatosis in Prader-Willi Syndrome and non-syndromic obesity.

M. Y. Pratama, D. Pascut, S. Tamini, A. Minocci, C. Tiribelli, G. Grugni, A. Sartorio

Journal of Clinical Medicine 9: 1123, 2020.

Background: Prader-Willi syndrome (PWS) is a rare and poorly characterized disease. Recent genomic and transcriptomic studies contributed to elucidate the molecular bases of the syndrome. In this study, we characterized the expression of circulating miRNAs in patients with PWS compared to those with non-syndromic obesity in association with liver steatosis.

Methods: MiRNAs were studied by qRT-PCR in serum samples from 30 PWS and 30 non-syndromic obese subjects.

Results: MiRNA expression was associated with the presence of the syndrome and to the grade of liver steatosis. MiR-122-5p, miR-151a, miR-92a-3p were up-regulated in obese (4.38-fold, $p < 0.01$; 2.72-fold, $p < 0.05$; 1.34-fold $p < 0.05$, respectively) and were able to differentiate obese from PWS (AUC = 0.81, sens/spec 78/71%). When stratifying groups according to the presence of steatosis, the expression of miR-151a-5p, miR-92a-3p, miR-106b-5p, and miR-93-5p were lower in PWS with steatosis grade 1. Within the group with steatosis grade 1, miR-151a-5p was significantly distinguished PWS from obese (AUC = 0.85, sens/spec 80/85%) and the combination of miR-106b-5p and miR-93-5p showed higher performances in discriminating different grades of steatosis in PWS (AUC = 0.84, sens/spec 93/74%).

Conclusions: MiRNAs represent a tool to better classify and characterize PWS, providing new information about the clinical picture and the extent of steatosis.

Se desidera avere la fotocopia di questo lavoro, per esclusivo uso personale, può fare richiesta per mail a: info@cresceresani.it indicando il titolo, gli autori, la rivista e il proprio recapito lavorativo (nome, cognome, indirizzo, CAP, città).