Comparison of antropometric and biochemical parameters in obese children with or without primary headache

Onur Akın<sup>1</sup>, Mutluay Arslan<sup>2</sup>

Gülhane Training and Research Hospital <sup>1</sup> Pediatric Endocrinology, <sup>3</sup>Pediatric Neurology., Ankara, Turkey

**Introduction and objectives:** 

The objective of our study was to investigate the physical examination and laboratory findings in obese children with or without

primary headaches.

**Methods:** 

A total of 161 children, aged 8-18, with obesity (90 female and 71 male) and primary headache, admitted to pediatric endocrinology

and pediatric neurology department between 2013 and 2018 were evaluated retrospectively. Participants were divided into

subgroups as with tension headache and migraine headache. Obese children without primary headache were included in the control

group. Laboratory and oxologic data were compared between the groups.

**Results:** 

Twenty-nine obese children had migraine and 35 had tension type headache. There was no statistically significant difference between

the groups with respect to gender, age, body mass index (BMI), BMI standard deviation score (BMI SDS), waist circumference and

hip circumference. LDL-cholesterol (LDL-C) and total cholesterol (TC) levels were significantly higher in obese children with

migraine headache compared to group without primary headache. There was no difference between the groups in terms of other

biochemical parameters.

**Conclusion:** 

There is a probable relationship between cholesterol elevation and migraine headache in obese children. Fot that reason, blood lipids

should be followed carefully in obese children with migraine headache.

**References:** 

Brna PM, Dooley JM. Headaches in the pediatric population. Semin Pediatr Neurol. 2006 Dec;13(4):222-30.

Harel Z, Gascon G, Riggs S, Vaz R, Brown W, Exil G. Supplementation with omega-3 polyunsaturated fatty acids in the management of recurrent migraines in adolescents. J Adolesc Health. 2002 Aug;31(2):154-61.

Monastero R, Pipia C, Cefalu AB, Liveri ET, Rosano R, Camarda R, et al. Association between plasma lipid levels and migraine in subjects aged > or =50 years: preliminary data from the Zabut Aging Project. Neurol Sci.

2008 May;29 Suppl 1:S179-81.

Fat, metabolism and obesity ONUR AKIN





