



PAEDIATRIC DERMATOLOGY

## EFFECTS OF INTRAVENOUS PULSE CORTICOSTEROID THERAPY OF ALOPECIA AREATA ON BODY MASS INDEX (BMI) IN CHILDREN

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**Introduction:** Intravenous pulse corticosteroid therapy (IVPC) is used in various dermatological indications. Several studies examined the effects of IVPC in children with alopecia areata (AA), but only a few reports on IVPC effects on body mass index (BMI).

**Objectives:** To determine the impact of IVPC on BMI and Z score in children.

**Materials and Methods:** This single-center prospective study included 47 patients with severe forms of AA (SALT>30), aged 2–18 years (mean 9.11±3.75). All patients received IVPC therapy (dexamethasone 1.5 mg/kg/day on three consecutive days). IVPC were repeated every 28 days, and all patients received 6 cycles. All patients/families received a detailed written instruction on high calories/high carbohydrate food avoidance. Before the commencement of IVPC, we measured patient's height and body weight, and calculated BMI and Z score for age (BMI1 and Z1). The measurements were repeated after the 6th cycle of IVPC (BMI6 and Z6).

**Results:** Comparing BMI1 with BMI6 among girls and boys, statistically significant difference was present, nevertheless, no significant difference comparing Z1 and Z6 scores was found. Both girls and boys increased their BMI by 3.7% and 4.6%, respectively. Comparing BMI1 and BMI6 among different age groups, we found statistically significant difference between the age group 6-10 and 10-14 years ( $p=0.017$  and  $p=0.002$ ; 4.6% and 7.9%, respectively). No statistically significant difference comparing Z1 and Z6 score among different age groups was present.

**Conclusion:** IVPC had an impact on BMI in children. BMI increase by 3.7% and 4.6% in girls and boys, respectively, was not clinically significant. Also, Z score for BMI has not changed significantly. In children aged 10-14 years, BMI increase was higher (7.9%), although Z score has not changed significantly. In this age group, the increase might be due to the lack





of parental control of children's eating habits during therapy.

