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**Evaluation of Eating Behavior in Children with Psoriasis: Retrospective Cross Sectional Study**

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***Background.*** *Patients with psoriasis have increased thickness of visceral fat, including epicardial adipose tissue (EAT) that has wide spectrum of biological effects. Its thickness can be affected by the presence of obesity and eating behavior (EB) changes. Studying the associations between EB and markers of adipose tissue functional activity in children with psoriasis may help to better understand this variables correlations in the scope of comorbidities.* ***Objective. Aim of the study is to*** *analyze the relationship between Psoriasis Area and Severity Index (PASI), Children's Dermatology Life Quality Index (CDLQI), EAT thickness, and leptin levels in pediatric patients with psoriasis and EB disorders.* ***Methods.*** *Retrospective cross sectional single-center study was conducted. 72 medical records of children with psoriasis ( with* *varying body mass index level) who were examined and treated in dermatology department in the period from December 2021 to January 2024. All included patients have underwent dietician consultation and survey with DEBQ and CEBQ questionnaires, as a result predominant EB type was determined. EAT thickness (via two-dimensional echocardiography) and leptin levels were also measured. Psoriasis severity was evaluated via PASI and CDLQI indices. Patients were divided into three groups: with external, emotionogenic, and restrictive EB. The medians of the obtained values were calculated with determination of the confidence interval, all results were compared with each other via Kruskall-Wallis test.* ***Results.*** *Group of patients with external EB has shown following results: median EAT thickness was 2.5 mm (Q1–Q3: 2.1–2.8), median leptin level — 17.3 ng/ml (Q1–Q3: 14.4–26.4), median of PASI — 17 points (Q1–Q3: 12.5–20.5), median of CDLQI — 7 points (Q1–Q3: 4–13.5). Group of patients with emotionogenic EB has median EAT thickness of 2.2 mm (Q1–Q3: 1.85–2.55), median leptin level — 20.1 ng/ml (Q1–Q3: 14.5–23.95), median of PASI — 14 points (Q1–Q3: 12–16.5), median of CDLQI — 6 points (Q1–Q3: 3–12). Group of patients with restrictive EB has median EAT thickness of 3.4 mm (Q1–Q3: 3.1–3.9), median leptin level — 28.2 ng/ml (Q1–Q3: 26.1–33.5), median of PASI — 24 points (Q1–Q3: 21–27), median of CDLQI — 13 points (Q1–Q3: 9–21). Statistically significant (p=0.0014) increase in PASI and CDLQI points was observed at comparison of different groups via Kruskall-Wallis test. Patients from restrictive EB group have shown higher values of EAT thickness, leptin levels, PASI, and CDLQI scores compared to patients with emotionogenic and external EB. No statistically significant differences were observed when comparing leptin levels and EAT thickness in the remaining groups.* ***Conclusion.*** *Patients with restrictive EB had higher PASI and CDLQI scores compared to patients with emotionogenic and external EB. No statistically significant differences were observed when comparing EAT thickness and leptin levels. Small study sample was the only research limitation.*

***Keywords:*** *psoriasis, eating behavior, epicardial adipose tissue, leptin, quality of life*

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Selection of psoriasis patients' medical records (n=341)

Study sampling from medical records meeting study inclusion criteria (n=72)

Patients with external EB (*n*=22)

Patients with emotionogenic EB (*n*=29)

Patients with restrictive EB (*n*=21)

**Fig. 1.** Study sampling

*Note.* EB (ПП) — eating behavior.

Fig. 2. Comparison of patient groups

Distribution of patients into groups, %

External EB

Emotionogenic EB

Restrictive EB

Fig. 3. Comparison of median epicardial adipose tissue thickness

Median epicardial adipose tissue thickness, mm

External EB

Emotionogenic EB

Restrictive EB

Fig. 4. Comparison of median leptin levels

Median leptin levels, ng/ml

External EB

Emotionogenic EB

Restrictive EB

Fig. 5. Median of PASI

Median of PASI, points

External EB

Emotionogenic EB

Restrictive EB

Fog. 6. Median of CDLQI

Median of CDLQI, points

External EB

Emotionogenic EB

Restrictive EB

**RESEARCH LIMITATIONS**

Small study sample and uneven distribution of patients by type of eating behavior were the only research limitations.

**FINANCING SOURCE**

Not declared.

**DISCLOSURE OF INTEREST**

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**AUTHORS CONTRIBUTION**

**Vladislav V. Ivanchikov** — manuscript writing, data processing.

**Eduard T. Ambarchyan** — manuscript writing, approval of the manuscript final version.

**Anastasiya D. Alekseeva** — manuscript writing, literature review.