**Diagnosis and Corneal Parameter Analysis in Children with Keratoconus: A Two-Year Continuous Study in Ukraine.**

**Abstract**

**Purpose**: The aim of this study was to assess the prevalence of keratoconus in children aged 6-16 years in Ukraine, investigate corneal parameter changes related to age, and identify potential risk factors for developing keratoconus.

**Methods**: A two-year continuous study was conducted at the National Children's Specialized Hospital "Ohmatdyt". A total of 420 children aged 6-16 were selected through routine ophthalmic check-ups. Diagnostic criteria for keratoconus included corneal thinning (<500 µm), increased curvature (>47 diopters), and specific topographic patterns. Corneal examinations were performed using the Pentacam device (Oculus GmbH, Wetzlar, Germany), and data were processed with SPSS version 25.0. T-tests and chi-square tests were used for statistical comparisons between groups. Statistical significance was set at p < 0.05.

**Results**: Keratoconus or a risk of developing it was identified in 92 children (21.9%). The average corneal thickness for children with keratoconus was 492.0 µm, significantly lower than the 532.9 µm measured in healthy children (p < 0.05). Corneal thinning was more pronounced in older children (ages 10-13), correlating with the onset of puberty (p < 0.05). Age-related changes in corneal curvature were also statistically significant.

**Conclusion**: Early detection and monitoring of keratoconus in children is crucial to prevent its progression. Future studies should focus on the development of morphometric corneal indicators for b**Trial Registration**: This clinical trial was registered at [Trial Registry Name] under registration number [Trial Registration Number].

**Data Repository**: The data set is available in [Repository Name] with identifier [Repository Number].

**Example of a complete abstract with placeholder information:**

**Trial Registration**: This clinical trial was registered at ClinicalTrials.gov under registration number NCT01234567.

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etter risk assessment. No data were deposited in a public repository.