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Reliability of various skeletal indicators in the assessing vertical facial soft tissue pattern

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Background: A proportionate relationship among different facial structures is the key to an esthetic and pleasing facial appearance. Previously, diagnosis and treatment planning had been based on Angle's paradigm. With the advent of soft tissue paradigm, the trend in orthodontic diagnosis and treatment planning has been significantly affected. Since the skeletal structures form the backbone supporting the soft tissue therefore both skeletal and soft tissue measurements should be taken into consideration. Currently an orthodontist has to perform various analyses to determine the vertical facial pattern which is time consuming. Therefore the rationale behind this study is to determine which of the commonly used skeletal analyses best correlates with the soft tissue parameters for assessing facial soft tissue pattern of an individual. Thus an accurate diagnosis can be made with the elimination of unnecessary analyses, ensuring an efficient treatment plan.

Objectives: 1. To determine the correlation between various skeletal analyses in vertical plane and soft tissue facial height ratio on lateral cephalogram among adult orthodontic patients at a tertiary care hospital in Karachi, Pakistan.

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Violation of cytokine regulation in children with chronic catarrhal gingivitis living in ecologically unfavorable areas

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In the polluted environmental conditions an activity of the functional response of immune system in children is reduced, that can lead to development of disease. The aim of the present study was to determine the cytokines content (IL-4 and IL-6) in the oral liquid of children with chronic catarrhal gingivitis (CCG), living in unfavorable ecological environmental conditions.

Methods: 186 children with CCG aged 7 to 16 years, residing in areas with different levels of ecological pollution were observed. The PMA and CPI indices were used for the assessment of periodontal status. Content of interleukins (IL-4; IL-6) in oral liquid was determined with using of solid-phase immunoenzyme assay and the reagents of "Vector-Best" company (Russia) were used for this purpose. The parental written consent was obtained from the participants.

Results: The level of cytokine IL-6 in oral liquid in children with CCG living in ecologically unfavorable area was significantly higher (17.02 ± 0.62 pg/ml) than the level of cytokines in children living in a relatively clean area (13.94 ± 1.41 pg/ml). The content of cytokine IL-4 in oral liquid in children with CCG from polluted region was found to be lower (6.64 ± 0.61 pg/ml) than in children living in a relatively clean area (8.38 ± 0.61 pg/ml). The content of IL-6 in oral liquid in children with slight CCG living in ecologically unfavorable area was as follows: 15.49 ± 0.62 pg/ml. The level of IL-6 in children with moderate CCG was equal to 18.12 ± 0.61 pg/ml, and it has been significantly higher than the corresponding IL-6 values in children from a relatively clean area (12.85 ± 0.62 pg/ml against 13.94 ± 1.41 pg/ml, $p < 0.05$). The content of anti-inflammatory cytokine IL-4 in oral liquid in children with slight CCG living in an adverse environmental conditions was found to be lower comparing to the corresponding cytokine level in children from a relatively clean area (6.72 ± 0.42 pg/ml against 8.06 ± 0.41 pg/ml). The lowered content of IL-4 was observed in children with moderate form of CCG living in the contaminated area relatively to the IL-4 level in children from clean area (4.81 ± 0.62 pg/ml against 6.72 ± 0.42 pg/ml, $p \leq 0.05$).

Conclusions: An increased level of cytokine IL-6 and reduced level of IL-4 has been found in oral liquid in children with CCG living in ecologically polluted area comparing to the children who live in a relatively clean area.

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