

OP15 EVALUATION OF CRANIOFACIAL MORPHOLOGY IN PATIENTS WITH CHRONIC KIDNEY DISEASE

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AIMS: To evaluate the effect of chronic kidney disease (CKD) on craniofacial morphology and growth by cephalometric analysis, in patients who were diagnosed with the disease during their growth and development period.

SUBJECTS AND METHOD: Thirty one patients with CKD divided into two subgroups according to the severity of the disease [those who did not require dialysis (pre-dialysis group) and those with end stage renal disease who underwent dialysis (dialysis group)]. The pre-dialysis group consisted of 13 subjects (6 females, 7 males) whose chronological ages ranged from 9.75 to 18.5 years (mean age 15.05 ± 2.91 years) and the dialysis group 18 subjects (7 females, 11 males) whose chronological ages ranged from 7 to 21 years (mean age 14.75 ± 3.76 years). The control group consisted of the archived pre-treatment material of 31 healthy age and gender matched subjects (13 females, 18 males), with skeletal Class I relationship and without any systemic medical disorders. Their chronological ages ranged from 7.5 to 21 years (mean age 14.92 ± 3.33 years). Lateral cephalometric, panoramic and hand and wrist radiographs were collected to evaluate craniofacial morphology, dental health status and bone age of the subjects. The data was analysed with parametric and non-parametric tests with a significance level of $P < 0.05$.

RESULTS: CKD patients in the pre-dialysis and dialysis groups had significantly reduced anterior and posterior cranial base lengths, larger cranial base and middle cranial base angles, decreased posterior cranial base angle, reduced maxillary base length, increased gonial angle, decreased posterior face height, increased maxillary/mandibular plane angle and increased mandibular posterior rotation. CKD patients in the dialysis group also showed significant decreases in ramus height, mandibular base length and upper anterior face.

CONCLUSION: Patients with CKD diagnosed during the growth and development period exhibit significant morphological changes in craniofacial features compared to healthy subjects.