

The Cephalometric magnetic System DirectCeph®

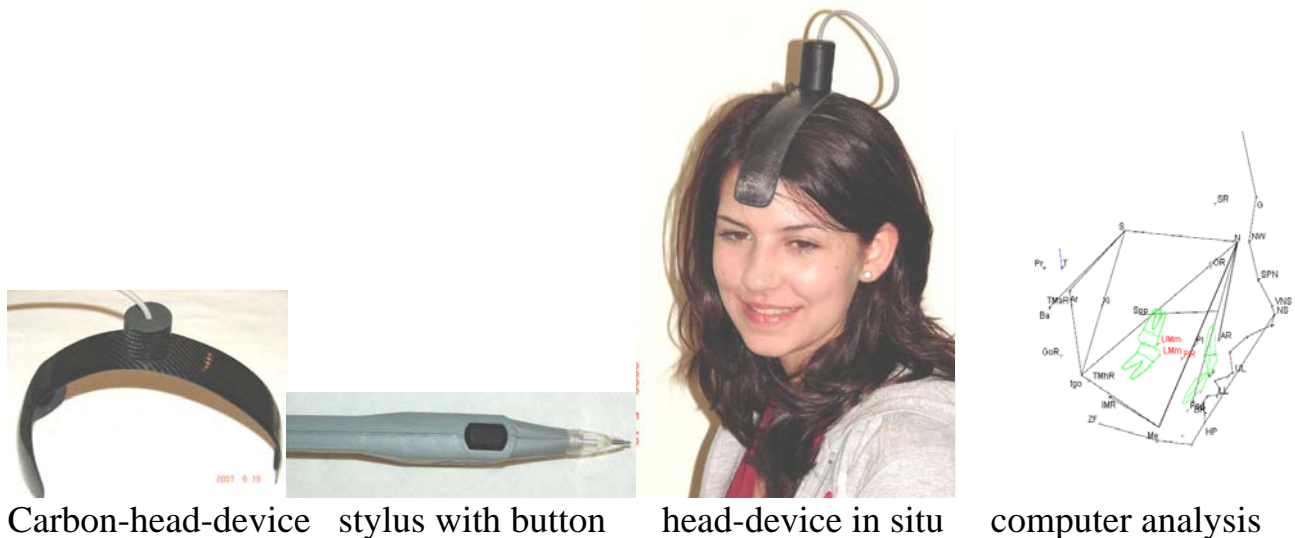
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AIM: There have been different attempts to bring a non-radiographic alternative to cephalometric radiography using direct sonic digitization of patients, but it has been suggested that the measurements be interpreted with caution. Others have used a three-dimensional (3D) digitizer with mechanical linkage ending in a stylus that allows the user to specify x , y and z positions. Tooth inclination seems to be a problem. The aim of this study was to evaluate the advantages of a **non-radiographic cephalometric system DirectCeph®**.

MATERIALS AND METHOD: The 3D digitizer works with a magnetic system for registration of 3D data. The digitizer consists of an electronic computer compartment, which is communicating with computer via a USB. The position and orientation of the stylus to the patient registered in a range of 600 to 600 to 800 mm. The spherical workspace is 6 metres. The cables of the head-device and the stylus have a length of 6 meters, so it can be moved within this range without moving the computer or laptop. An accuracy of 0.30 mm is reported. The reproducibility of its clinical usefulness, based on the measurements of the subject and of the measurement of radiographs from the same patient was compared. For statistical analysis, the Students t -test, variance analysis and Wilcoxon test was used.

RESULT: From the total of all measurements, a statistically significant difference between the radiographs and 3D measurement of the patient was seen for the following measurements: SNA and SNB and in three soft tissue points.

CONCLUSION: For conventional treatment planning there does not seem to be a need to change from traditional analysis. Ricketts Analysis might be as useful as Frankfurt.



Carbon-head-device

stylus with button

head-device in situ

computer analysis