[**Print Version**]
[**PubMed Citation**] [**Related Articles in PubMed**]

A comparison between radiographic and sonically produced cephalometric values

James S. Prawat, DDS; Lewis Nieberg, DDS, MS; George J. Cisneros, DMD, MMSc;[a] George Acs, DMD, MPH

[a]Director, Division of Orthodontics, Montefiore Medical Center, 111 E. 210th St., Bronx, N.Y. 10467

ABSTRACT

Cephalometric radiography has become a standard and invaluable means of obtaining diagnostic information for the management of malocclusion and skeletal disharmony. However, concerns over radiographic exposure, particularly in growing individuals, may limit its use, especially in longitudinal analyses. Less invasive means of obtaining vital information would be desirable. A recently introduced system (Digigraph™, Dolphin Imaging Systems; Valencia, Calif) provides sonically produced representations of cranial landmarks and has been introduced by its manufacturer as an alternative to standard cephalometric radiography. The purpose of the study was to compare the validity and reproducibility of cephalometric values generated sonically on a digital image analyzer (Digigraph™) with those obtained from standard cephalometric radiographs for 43 different measurements. Although 58.1% of the sonically produced measurements showed significant correlation with radiographically produced measurements, there were no trends observed for correlation, either in dental or skeletal structure classifications. Additionally, this study found the data generated from the digital image analyzer to be markedly variable, while the radiographically obtained data were reproducible.

J.S. Prawat is in private practice in Richmond, Indiana

L. Nieberg is an instructor, Division of Orthodontics, Montefiore Medical Center, Bronx, N.Y

G.J. Cisneros is director, Division of Orthodontics, Montefiore Medical Center, Bronx, N.Y

G. Acs is chairman of the Department of Dentistry, Children's National Medical Center, Washington, D.C

KEY WORDS: Cephalometric, Digital, Sonic, Reproducibility.