1. **Intra- and Inter-Observers Agreements in Tracing of Submentovertex as a Prerequisite for Corrected Lateral Tomography of TMJ**. Egyptian Dental Journal, 50 (4):1963-1975, October, 2004.

Abstract:

TMJ is a complex articulation that shows great variability from one individual to another and also within each individual, indicating that the normal range of the condyle morphology, angulation, and position are fairly large. Tomography is a better tool for condyle/fossa relationship assessment, the technique overcome the problem of superimposition of anatomic structures hindered, allow accurate and repeatable visualization of TMJ pathology. Before started corrected lateral tomographic examination of the TMJ, submento-vertex Cephalometric projection had been taken for determination of the horizontal condylar axis using hypocycloidal multislice tomography with Comm CAT multidirectional tomographic machine. Twenty patients of both sexes with different ages were selected. Measurements of the horizontal condylar angle and the condylar head length were taken from each scanned SMV image, 3 times with one month interval by the same observer, during each tracing; data from the previous scan were obscured. Then tracings of the SMV images were done by 4 observers independently. There was a significant difference in the linear measurements of the condyles. Also there was a significant difference in the horizontal condylar angle in intra-observer measurements 7^0 on the right condylar angle and 8^0 on the left condylar angle as well as in the inter-observer measurements 8^0 on the right side and 10^0 on the left side. In addition, there was no significant difference and strong confidence correlation in-between intra-observer and inter-observer measurements except only one of the inter-observer showed a significant difference, also a great reliability and small

angle variation in intra-observers measurements compared to inter-observers measurements. Moreover there were some similarities between the intra-observer and inter-observers data, including poor reliability of the condylar poles and poor reliability of the horizontal condylar angles.