



Physical Anthropology Section – 2006

H7 Age of Closure of the Spheno-Occipital Synchondrosis in the Arabian Gulf Region

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After attending this presentation, attendees will be provided with age standards for fusion of the Spheno-occipital Synchondrosis based on an Arabian Gulf sample.

This presentation will impact the forensic community and/or humanity by establishing normative age identification standards for Arabian Gulf area populations.

The closure of the spheno-occipital synchondrosis may be regarded as a significant age marker when investigating incomplete human remains. However, the age at which the Spheno-occipital synchondrosis ossifies is still a matter of debate. Fusion has been described in individuals aged as early as ten years and as late as 25 years. The present study investigates the age of fusion of the spheno-occipital synchondrosis in a sample from the Arabian Gulf as a trial to establish a reference standard to be used locally. A total number of 207 subjects with known ages (between 9 and 23 years) were selected among those who had computed tomography (CT) examination for visualization of the base of skull. The state of closure of the spheno-occipital synchondrosis, as seen on high resolution thin-section CT scans, was recorded as closed or open. Partial closure was categorized as open. In males, complete closure of the spheno-occipital synchondrosis was observed as early as 12 years old, and all males past the age of 18 years exhibited closed synchondroses. In females, the corresponding ages were 11 years for earliest fusion and 16 years for the age in which all females demonstrated complete closure.

Arabian Gulf, Age of Closure, Spheno-Occipital Synchondrosis