

## Estimating Age In Deceased Persons From The North Indian Population Using Ossification Of The Sternoclavicular Joint

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**Abstract :** Background: Age estimation is a common problem in administrative settings, medico legal cases, and among athletes competing in different sports. Age estimation is a problem in medico legal problems that arise in hospitals when there has been a criminal abortion, when consenting to surgery or a general physical examination, when there has been infanticide, impotence, sterility, etc. Medical imaging progress has benefited forensic anthropology in various ways, most notably in the area of determining bone age. An efficient method for researching the epiphyseal union and other differences in the body's bones and joints is multi-slice computed tomography. There isn't a significant database on Indians available. So to obtain an Indian based database author has performed this original study. Methodologies: The appearance and fusion of ossification centre of sternoclavicular joint is evaluated, and grades were assigned accordingly. Using MSCT scans, we examined the relationship between the age of the deceased and alterations in the sternoclavicular joint during the appearance and union in 500 instances, 327 men and 173 females, in the age range of 0 to 25 years. Results: According to our research in both the male and female groups, the ossification centre for the medial end of the clavicle first appeared between the ages of 18.5 and 17.1 respectively. The age range of the partial union was 20.4 and 20.2 years old. The earliest age of complete fusion was 23 years for males and 22 years for females. For fusion of their sternebrae into one, age range is 11-24 years for females and 17-24 years. The fusion of the third and fourth sternebrae was completed by 11 years. The fusions of the first and second and second and third sternebrae occur by the age of 17 years. Furthermore, correlation and reliability were carried out which yielded significant results. Conclusion: With numerous exceptions, the projected values are consistent with a large number of the previously developed age charts. These variations may be caused by the ethnic or regional heterogeneity in the ossification pattern among the population under study. The pattern of bone maturation did not significantly differ between the sexes, according to the study. The study's age range was 0 to 25 years, and for obvious reasons, the majority of the occurrences occurred in the last five years, or between 20 and 25 years of age. This resulted in a comparatively smaller study population for the 12-18 age group, where age estimate is crucial because of current legal requirements. It will require specialized PMCT research in this age range to produce population standard charts for age estimate. The medial end of the clavicle is one of several ossification foci that are being thoroughly investigated since they are challenging to assess with a traditional X-ray examination. Combining the two has been shown to be a valid result when it comes to raising the age beyond eighteen.

**Keywords :** age estimation, sternoclavicular joint, medial clavicle, computed tomography

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