

Morphology of Hyoid Bone with its Forensic Implication

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Abstract

Background: The hyoid bone is of considerable forensic interest owing to its susceptibility to fracture during manual strangulation, hanging and other forms of neck compression. The hyoid bone is also not infrequently injured in road traffic accidents and may cause significant airway concerns. A hyoid bone's shape may influence its susceptibility to fracture and hyoid fractures are frequently confused with normal variation in both clinical and forensic settings. Current literature regarding the shape and size of the hyoid bone is mostly from European studies. Scarcity of data on Indian subjects led us to undertake this study. **Objectives:** To anatomically classify the hyoid bone according to Shape & Dimensions and to note if any gender variation exist. **Methods:** The study was conducted on fifty hyoid bone specimens obtained from medico-legal postmortems conducted in the Department of FMT, Maulana Azad Medical College, New Delhi. **Results:** It is observed that the most common pattern of hyoid is of the Hyperbola type in either sex and the boat type being the least common. The second leading form is the Parabola type in males and the Horseshoe type in females. Of the 50 hyoid bones studied 33 were symmetrical and 17 were asymmetrical. **Conclusion:** The presence of a fractured hyoid bone is often of great importance in cases involving badly decomposed bodies and skeletal remains lacking soft tissue evidence of neck injury. Our study is an attempt to provide preliminary data regarding variation in shape of hyoid bones obtained from autopsy of Indian subjects.