**Introduction**

The hyoid bone is located in front of the cervical spine (the bones of the neck). It is located at the level of the 3rd cervical vertebra. It attaches, by means of ligaments, to a projection of bone called the styloid process which extends from the temporal bone. The hyoid bone is firmly secured to the thyroid cartilage**. *(Ramagalla et al., 2014)***

At birth, the hyoid bone consists of a central body and pairs of lesser and greater cornua. Fusion of the greater cornua with the body normally occurs in adulthood above the age of 25 years old, but may not occur at all in some individuals**. *(Fisher et al., 2016)***

Widely accepted morphological classification does not exist. It is commonly classified into two types, hyperbolic (U-type) and parabolic (V-type), but there is also alternative classification model that recognizes five bone types: D-, B-, H-, U- and V-type. Existence of large number of asymmetrical bones as well as the assumptions of sexual dimorphism makes universal morphological classification even more difficult. **(Lekšan et al., 2005)**

The hyoid bone is classified as a sesamoid bone which means it is a freely floating bone. However, it is anything but freely floating. The hyoid bone is a vestigial structure and is found as part of the tongue in lower animal forms. The hyoid bone is attached to the base of the skull, the mandible, the tongue, the larynx, and the scapular belt. **(Auvenshine and petit, 2020)**

The hyoid bone supports the base of the tongue and is involved in breathing , chewing and swallowing as well as in the muscle movements associated with articulation***.(Ito et al., 2012).***

Even though the hyoid bone is an important structure, it has not received the attention that it deserves. It participates in the function of speech, respiration, mastication, and swallowing, as well as maintaining the patency of the airway between the oropharynx and the tracheal rings. Knowledge of the anatomy and physiology of the hyoid is necessary for recognition of the clinical presentation of related disorders and syndromes. ***(Auvenshine and Petit, 2020)***

The distance between the hyoid and mandible is increased with aging, and a more posterior position of the hyoid bone is correlated with swallowing defects in older males. These findings suggest that age-related changes in hyoid bone position may be a component of decreased swallowing safety and aspiration in older adults and warrant further investigation *.(****Feng et al., 2014)***

Establishing the identity of unidentified human remains is crucial in forensic investigations, particularly in the analysis of dismembered, burned, or severely mutilated cadavers or skeletal remains. In such cases, sex determination from an assessment of the skeletal remains is a priority because the determined sex is usually used as a foundation for the estimation of other biological profiles, such as stature and age.Although the pelvis and skull are the optimal skeletal regions for the accurate determination of sex, these bones may be damaged, fragmented, or incomplete, particularly in cases of mass disasters and human rights investigations. Therefore, an alternative method using other bones should be developed for cases where both the pelvis and skull are unavailable. The hyoid bone obtained from autopsies or burials may be useful for identifying crimes involving neck injuries as evidence of ante mortem trauma**. *(Torimitsu et al. 2017)***

So***,*** Torimitsu et al. (2017) further encourages researchers to conduct more studies on the hyoid bone and its potential in determining age, sex, race and cause of death, within different population groups. **(Shangase et al., 2021)**

Few years after 1900, sex determination by using hyoid was proposed, many studies have documented sex prediction potential of human hyoid .To estimate sex from hyoid bones, metric measurements have been used alone, or in combination with morphologic characteristics. ***(Soltani et al., 2017)***

In recent years, three-dimensional (3D) imaging systems have become widely available, leading to their use in research. A metric approach, with rigorous, repeatable, and reproducible methodology using 3D reconstruction obtained from computed tomography (CT) images, has

been shown to be more objective than a morphological description of the bone by visual analysis. The metric approach also reduces variability in different models .CT also provides digital 3D data, a source of information for morphometric analysis. ***(Fakhry et al., 2013)***

Three-dimensional (3D) imaging has the combined advantages of manual measurement of bone and 2D imaging and permits assessment of hyoid bone shape and dimensions as well as its growth relative to other structures during the course of development. Computed tomography (CT) scans are effective. *(****Cotter et al.,******2015****)*

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