Prevalence of Torus Mandibularis in Rochester, New York, Region


A B S T R A C T

The purpose of this study was to investigate the prevalence of torus mandibularis within a population residing in the Rochester, New York, region. During a comprehensive initial exam, utilizing clinical inspection and palpation, 1,323 subjects were examined for any tori in the mandibular area. Of the 1,323 subjects studied, 37.8% had tori mandibularis, with a higher frequency occurring in male patients (overall mean age: 40 years). In the Rochester, New York, area the observations noted a high prevalence of torus mandibularis (37.8%), with a mean population age of 40 years; 52% of the tori were observed in men.

Torus mandibularis is defined as a nodular protuberance of mature bone, the precise designation of which depends upon anatomic location. Tori mandibularis are considered to be the most common intraoral osseous outgrowths. Histological features of tori compared to other types of bony exostoses of the human skeleton are identical. These are described as “hyperplastic bone outgrowth, consisting of mature cortical and trabecular bone.” An autosomal dominant genetic pattern has been suggested in the expression of tori mandibularis.

Since there are few studies on this subject in the United States, the importance of this clinical finding will help to explain the frequent need for exostosis removal to permit proper adaptation of a prosthesis involving the tori area. Authors have suggested the presence of a tori mandibularis can be correlated with a temporomandibular dysfunction. Another study of 1,600 radiographs of dry skulls at the University of Iowa showed that 16.9% of the skulls had radiographically detectable mandibular tori, with some cohorts as high as 33%. Lobulated tori extending 4 mm or more mediolaterally were radiographically detectable.

Torus mandibularis can be of great importance in restorative dentistry. It is necessary to detect these bony overgrowths during treatment planning and before making any decisions regarding fabrication of dental prostheses. It is crucial to understand the prevalence in our society and to take this into consideration during an initial clinical exam. Tori are often located in the mandible along the surface nearest to the tongue. Mandibular tori are usually present near the premolars and above the mylohyoid muscle attachment on the lingual border of the mandible. They can be found unilaterally or bilaterally and have an unknown etiology. Large tori may require removal because they interfere with tongue positioning, speech and prosthetic reconstruction, as well as with oral hygiene around the lower posterior teeth.

Sonnier, in a study of 328 modern American skulls, showed a prevalence of 27% (42% of dentate skulls), with higher prevalence among male African-Americans. The prevalence of torus mandibularis in the Rochester, New York, region has not been evaluated; therefore, we are interested in analyzing the frequency of torus mandibularis in Monroe County.