



Letter to the editor

Tooth mobility: A plausible predictor of bony margins

Sir, we read the article by Singh et al. [1] with great interest and would like to add further to the existing literature.

Mucosal margins and bony margins are independent prognostic entities [2], the nature of tumour spread depends on its composition (presence or absence of neurovascular involvement [3], microvascular density [4], bone density), location, tumour biology, host factors and the overall treatment time [5,6]. There is a unanimous agreement in the literature regarding post resection overall margins (bony + mucosal) and its further management, however there has been a dearth of studies on bony margins, its behaviour in the presence of positivity. Mandibular bone erosion and medullary infiltration show a distinct cellular and molecular mechanism [7]. A lack of local disease control by an incomplete resection is catastrophic considering the fact that Oral cancer is known for its loco-regional invasion.

The general consensus in oncology is the tumour to be resected with clear margins with no compromise in the oncological clearance. Nonetheless, a yardstick of 5 mm clear margins [8] from the tumour to the edge of the specimen may not be universally applicable in all subsites of the Head and Neck region. An anatomical method assumed to be the most predictable for surgical clearance is if the tumour breaches a particular tissue plane, it is wise to leap into the next anatomical tissue plane. This is in contrast to bony margins that lack the distinct anatomic planes, precludes the use of a tumour free margin for rapid frozen section and carry significant morbidity in terms of speech, swallow and mastication with an aggressive bony resection.

The anterior mandible contains a large amount of mineralized bone but a small amount of bone marrow [9] in comparison to the posterior mandible. The mental, mandibular foramen a potential gateway for the tumour to unveil its invasive nature. Breach of the robust periosteum, infiltration of the nerves and vessels eroding the bone, all this aggravates the biology and behaviour of the tumour [10]. The mandibular alveolar bone endures an aging process, similar to all other bones. The trabeculae become thin and perforated, inferior cortices turn out to be more porous and thin [11–13], as a result the invasion into the medullary cavities happens much early in the elderly individuals.

It is essential to understand that an unexplained mobility of the posterior tooth on clinical examination in the absence of any established periodontal disease are red flags of bone marrow involvement. Tumor cells in the medullary space disperse into the systemic circulation and carry a poor prognosis [14]. Bony cuts irrespective of the tumour size or the cortical/medullary involvement in the presence of tooth mobility (a predictor for positive bony margin) should be posterior to the mandibular foramen and medial to the mental foramen. Tumour cells in the medullary spaces have potential avenues for progression, hence the entire compartment bearing the two exit points: mandibular and mental foramen are at risk for vascular invasion, perineural spread and finally regional lymph node metastases. Tailoring the resection based on the clinical assessment, potential pathways of spread and anatomical boundaries can help in the accomplishment of a

negative margin [15]. The authors have drawn a definite conclusion from the 400 patients enrolled in the study and have put forth a safe bony margin of 15 mm. We suggest that the presence of tooth mobility irrespective of the topographic representation of the tumour could guide our bony cuts and include the mental and mandibular foramen. Tooth mobility can be a viable clinical aid to forecast the underlying bone erosion and further studies are warranted that can compare the tooth mobility and the medullary invasion as seen in the imaging.

Conflict of interest

The authors have no conflict of interest.

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