

Intra-oral Ultrasound: A new armamentarium in hands of Ultrasonologist

Editorial

In India, Carcinoma tongue and oral cavity is very common due to habit of chewing Gutka and smoking bidi/cigarette. Oncologist and onco-surgeon assess growth or ulcer in oral cavity by taking history and by doing clinical examination. Thereafter, patient is sent for radiological investigation. Radiologist's earlier used to do extra-oral ultrasound with large footprint linear probe. However, these ultrasound probe had limitation of low resolution, and limited visualization. Now with technological advancement, we have availability of high resolution J shaped Hockey stick ultrasound probes, which can be placed directly intra-orally on tongue, lip, gingiva, tonsil or buccal mucosa. Advantage of intra-oral ultrasound is availability of high resolution imaging, along with possibility to do therapeutic maneuvers in same sitting, like drainage of tonsillar abscess.

Another concept we should know before doing intra-oral ultrasound is concept of Depth of Invasion (DOI). Earlier, we used to measure tumour thickness (TT), which was maximum thickness from lesion surface to maximum depth of lesion. Now, with 8th Edition of the American Joint Committee on Cancer (AJCC) Staging of Head and Neck Cancer, new concept of DOI has been added. For DOI measurement, we create artificial line connecting adjoining normal mucosal surface across lesion to adjoining normal mucosal surface. From this artificially created line, we measure perpendicular distance to maximum depth of lesion. So, for proliferative growth, we have TT more than DOI; and for ulcerative lesion, we have DOI more than TT. For flat lesion, we have DOI same as TT.

Many manuscripts have been published which have amplified importance of measuring DOI, specially for Carcinoma tongue. If DOI is more than 4 mm, then neck lymph node dissection should be done even if on neck ultrasound, neck lymph nodes look normal; as there is high probability of finding neck lymph node metastasis on histopathology examination. However, neck lymph node dissection

can be avoided if DOI is less than 4 mm. Moreover, on literature review we find intra-oral ultrasound to have important role, especially in Stage 1 and 2 intra-oral cancers. So, intra-oral ultrasound has important role to play in resource deficient country like India, where we have limited availability of Cross sectional imaging modalities like Computed Tomography (CT) and Magnetic Resonance Imaging (MRI). However, limitation is added cost of buying J shaped hockey stick probe, along with software for doing intra-oral ultrasound. And learning curve or expertise which is needed for doing intra-oral ultrasound. Moreover, these J shaped hockey stick probes can't be used in patients with trismus and limited mouth opening.

Acknowledgments

None.

Conflicts of interest

Author declare there is no conflicts of interest.

Volume 10 Issue 4 - 2023

Pankaj Sharma, Pooja Kundu

Additional Professor Radiodagnosis, AIIMS Rishikesh, Uttarakhand, India

Correspondence: Pankaj Sharma, Additional Professor Radiodagnosis, AIIMS Rishikesh, Uttarakhand, India, Tel +91 8439225566, Email pankajra7477@yahoo.com

Received: September 11, 2023 | **Published:** September 13, 2023