

Emerging understanding of dosimetric factors impacting on dysphagia and nutrition following radiotherapy for oropharyngeal cancer

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ABSTRACT: *Background.* Research has reported relationships between 3-dimensional (3D) radiation dose to head and neck structures and consequential swallowing/nutritional outcomes. However, this evidence is preliminary. The current study aimed to identify which reported dose constraints identified functional impairment at 6 months posttreatment.

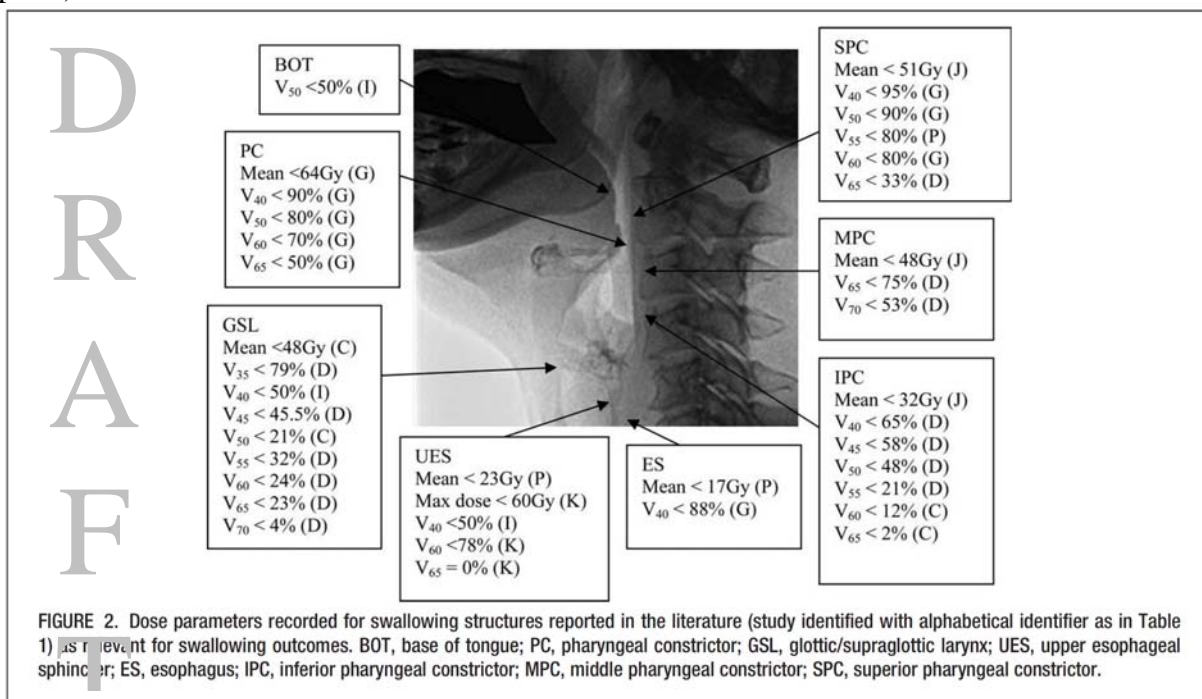
Methods. Dose constraints with reported relationships to swallowing and nutrition were identified through a systematic literature review. Dose–volume histograms for 12 patients with T1–T3 oropharyngeal cancer treated with 3D conformal radiotherapy determined dosages delivered to specific structures. Doses were examined in relation to published dose constraints and the swallowing and nutritional outcomes at 6 months posttreatment.

Results. In all, 66% of the reported mean, maximum, and partial doses to 8 structures correctly identified swallowing and nutrition outcomes at 6 months.

Conclusion. The relationships observed between known dosimetric constraints and functional outcomes highlight the potential for dosimetric data to assist in prognosis and treatment. Systematic research is required to refine dosimetric parameters and the impact on functional outcomes.
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KEY WORDS: radiation dosimetry, dose–volume histogram, oropharyngeal cancer, swallowing, nutrition, functional outcomes

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Comment: Articolo interessante: gli Autori analizzano un gruppo di pazienti con tumore dell'orofaringe e propongono una interessante analisi nel loro studio sul rapporto tra la disfagia/malnutrizione ed i constrains di dose delle strutture correlate con la deglutizione.

Presentano, quindi, una revisione sistematica della letteratura dalla quale sono stati selezionati alcuni lavori pubblicati tra il 2001 e il 2010 che mostrano in tabelle (di lettura intuitiva) una correlazione fra numerosi parametri dosimetrici quali la dose massima, media o parziale agli organi a rischio coinvolti nella deglutizione e il grado di tossicità post-trattamento.

Consigliata la lettura

Dr. Orietta Caspiani

Ospedale Fate bene fratelli.

Isola Tiberina

Roma