



Service Priorities and Programmes
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Impact of diffuse idiopathic skeletal hyperostosis (DISH) on pharyngeal stage of swallowing

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Introduction

Osteophyte is bony projection that forms along joint margin. The formation has been classically related to any sequential and consequential changes in bone formation that is due to aging, degeneration, mechanical instability or Diffuse Idiopathic Skeletal Hyperostosis (DISH) which is a non-inflammatory spondyloarthropathy that predominantly affects the spine. Pharyngeal dysphagia may be caused by large lesions that are located at the anterior part of the cervical vertebrae.

Objectives

To review the physical and physiological impacts of DISH on pharyngeal stage of swallowing and compensatory maneuver for reducing the risk of penetration and aspiration of food substances in Video-fluoroscopic Swallowing Study (VFSS)

Methodology

Reports of the VFSS that conducted between Nov., 2015 and Nov., 2017 were reviewed retrospectively. Patients with DISH identified in the anterior cervical spine and had no known disorders that commonly contributed to oro-pharyngeal dysphagia, such as neurological, respiratory and head & neck cancer, were selected.

Result

- DISH was found to have occupied and compressed the pharyngeal space led to reduction of retro-flexion of epiglottis and / or overflow of residue from pyriform fossa.
- 8 cases (7 males and 1 female) were identified with significant DISH at C3/4 to C6/7 and presence of penetration or aspiration on at least one of consistencies tried.
- 3 cases were found to have penetration and aspiration across all consistencies. Penetrations or/and aspiration were alleviated with head tilt as compensatory posture in 2 of them. 1 of these cases was recommended non-oral feeding as none of consistencies was found to be safe even with compensatory maneuver.
- All cases were found to have penetration or/ and aspiration on thin liquid. The thinner the consistency, the more difficult to be tolerated by these patients.

- There should be more pharyngeal dysphagic patients commonly associated with neurogenic or respiratory cause exacerbated with the presence of DISH. Clinicians are encouraged to be aware of the effect of DISH on swallowing function and may try to apply compensatory posture to minimize penetration and aspiration risk.