

Incidental Cervical Spine Radiological Variant In Suspected Foreign Body Impaction

S Davis, A Carswell, S Maini, M Bradley, A Shaaban

Citation

S Davis, A Carswell, S Maini, M Bradley, A Shaaban. *Incidental Cervical Spine Radiological Variant In Suspected Foreign Body Impaction*. The Internet Journal of Otorhinolaryngology. 2006 Volume 6 Number 1.

Abstract

Soft tissue calcification of the anterior aspect of the cervical spine is not uncommon. Its appearance on a lateral cervical spine x-ray may be misinterpreted as foreign material in cases of suspected impacted food bolus. This report highlights the point that clinical assessment is more important than x-ray findings, appreciation of cervical spine anomalies is valuable and a conservative approach is appropriate in some cases.

INTRODUCTION

Lateral cervical spine soft tissue x-ray is often requested in emergency departments to demonstrate the presence and level of a suspected foreign body. Radiology can support clinical suspicion. Endoscopy is undertaken if symptoms persist.

CASE REPORT

A previously well 42 year old lady attended an emergency department with a history of foreign body, having swallowed a duck bone 18 hours previously. The patient complained of persistent neck discomfort, maximal in the right submandibular region, and mild odynophagia. Full otolaryngological examination was normal. A soft tissue lateral cervical x-ray showed a well-defined opacity anterior to the level of C6-C7 intervertebral disc (figure 1).

Figure 1

Figure 1



On account of persistent odynophagia, the patient underwent pharyngolaryngoscopy under general anaesthesia. No luminal foreign material was identified. A mucosal protrusion of the posterior pharyngeal wall was noted at the level of cricopharyngeus.

The following day the symptoms had completely resolved and a repeat x-ray was done. The radiological review of all films identified cervical spondylosis, intervertebral disc degeneration and posterior osteophytes. The calcification anterior to the C6-C7 disc space was unchanged and was considered to represent soft tissue calcification. The patient was discharged that day.

DISCUSSION

Clinical assessment is more important than radiological

investigation in isolation.

The site of a foreign body impacted superior to cricopharyngeus is usually well localised; those at the level of cricopharyngeus and below are less well localised₁. Clinical evaluation of the origin of pain did not correlate with foreign body impaction at the cricopharyngeal junction, as pain was localised superior to this level. On retrospective review, the x-ray did not show any features associated with foreign body impaction, such as soft tissue swelling, pre-vertebral gas and upper oesophageal air. The opaque lesion was therefore considered to be a radiological variant.

Radio-opaque abnormalities of the anterior aspect of the cervical spine are common and are often related to degenerative changes, such as osteophytes. Anterior longitudinal ligament and annulus fibrosis calcification can arise follow trauma to the cervical spine₂. Forestier's Disease, or diffuse idiopathic skeletal hyperostosis (DISH)₃, classically produces calcification that bridges vertebra. Limbus vertebrae_{4,5,6} are secondary ossification sites, classically seen at the anterior-inferior margin of vertebrae. Interpretation of cervical spine radiographs should always be made in the context of the clinical assessment.

The indication for endoscopic evaluation was the patient's unresolved yet mild symptoms. However, in patients with mild symptoms, there is an argument for a period of observation and seeking a radiological opinion prior to

undertaking endoscopic evaluation.

CONCLUSION

Radiological variants can confuse the assessment of patients presenting with bony food bolus impaction. An appreciation of the correlation of symptoms to radiological findings, as well as the common cervical spine anomalies encountered, is useful.

CORRESPONDENCE TO

Mr S Davis (Clinical Fellow in ENT) c/o ENT department, Southmead Hospital, Westbury-on-Trym Bristol, BS10 5NB
Telephone 0117 9596344 Fax 0117 9595850 Email: sd4166@hotmail.com

References

1. Emergencies in medical practice, 8th edition. Birch. p186-187. Livingstone 1967.
2. D Resnick and G Niwayama Radiographic and pathologic features of spinal involvement in diffuse idiopathic skeletal hyperostosis (DISH) Radiology, 1976; 119, 559-568,
3. Patel-Naresh-P, Wright-Neill-M, Choi-William-W, McBride-Duncan-Q, Johnson-J-Patrick. Forestier disease associated with a retroodontoid mass causing cervicomedullary compression. Journal of Neurosurgery, Mar 2002; 96, no. 2 Suppl, p. 190-6
4. M. Mupparapu, A. Vuppapapati and E. Mozaffari Radiographic diagnosis of Limbus vertebra on a lateral cephalometric film: report of a case Dentomaxillofacial Radiology; 31, Issue 5 328-330.
5. Normal roentgen variants that may simulate disease, 6th Edition. Keats T. p 281, Mosby 1996.
6. S Kerns, T L Pope, E de Lange, R E Fechner, T E Keats, C Cimmino. Skeletal Radiology 1986; 15 (8):605-9.

Author Information

Simon Davis, MRCS

Clinical Research Fellow in ENT, Southmead Hospital

Andrew Carswell, MRCS

Senior House Officer in ENT, Southmead Hospital

Sangeeta Maini, MD

Specialist Registrar in ENT, Southmead Hospital

Michael Bradley, FRCR

Consultant Radiologist, Southmead Hospital

Ahmed Shaaban, FRORL

Consultant Otorhinolaryngologist, Southmead Hospital