Chondrosarcoma Of The Larynx

S Berry, J Addams-Williams, H Khalil, S Armstrong, K Denton, D Baldwin

Citation

S Berry, J Addams-Williams, H Khalil, S Armstrong, K Denton, D Baldwin. *Chondrosarcoma Of The Larynx*. The Internet Journal of Otorhinolaryngology. 2002 Volume 2 Number 2.

Abstract

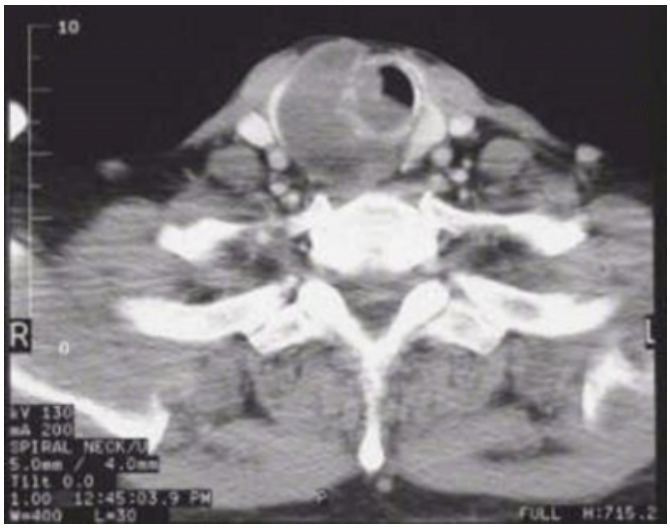
Chondrosarcoma of the larynx are rare tumours constituting approximately less than 2% of all laryngeal neoplasms. We present a case of laryngeal chondrosarcoma of the cricoid cartilage and its management.

CASE REPORT

A 74 year old gentleman was referred to our department from the Ear, Nose and Throat Department of a district general hospital. He had initially presented to the other department with one year history of hoarseness. He did not have any other symptoms. On examination, there was a right vocal cord palsy and an obvious subglottic swelling. A direct laryngoscopy and biopsy was performed. The histology was interpreted as being cartilage. A further biopsy was planned but the patient presented with severe stridor and had an emergency tracheostomy. A second biopsy of the subglottic swelling was performed at the time. This was suggestive of a chondrosarcoma. An MRI scan was not possible as the patient had difficulty lying still for the duration of the examination. A CT scan of the neck showed a large low density subglottic mass eccentrically to the right causing significant narrowing of the subglottic airway with extension of the mass from level of the cords inferiorly for 4.5cms. There were significant components of the mass within the subglottis with partial destruction of the right side of the cricoid cartilage and upper tracheal rings. Posteriorly, the mass crossed the midline with no regional lymphadenopathy.

Figure 1

Figure 1: A CT scan of the neck showed a large low density subglottic mass eccentrically to the right causing significant narrowing of the subglottic airway.

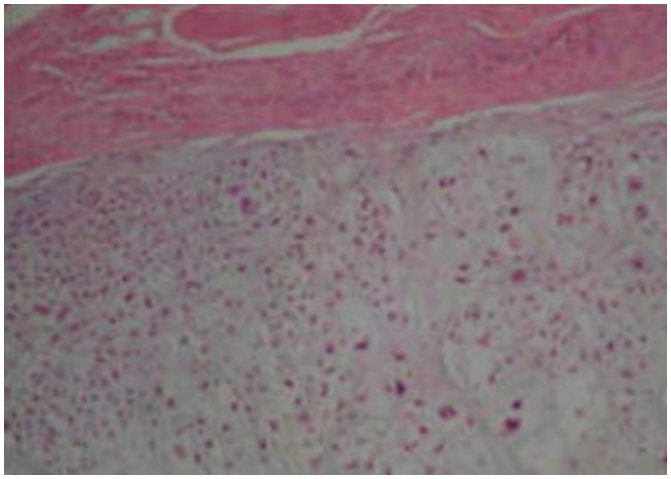


Routine blood and liver function test were within normal limits and on chest X-ray, no abnormality was detected. The patient had a total laryngectomy and a right partial thyroidectomy. There was evidence of a submucosal extension of the tumour involving the medial wall of the right pyriform fossa, hence a partial pharyngectomy and a right selective neck dissection were performed. The patient had an uneventful postoperative period.

The definitive histology confirmed a low grade chondrosarcoma with no de-differentiation. The excision margins were clear with no involvement of the excised lymph nodes. The stain used was haematoxylin and eosin

Figure 2

Figure 2: Histology showing a low grade chondrosarcoma with no de-differentiation (Haematoxylin & Eosin stain)



There were no plans to proceed with postoperative radiotherapy in the head and neck/ oncology multidisciplinary meeting.

DISCUSSION

Chondrosarcomas of the larynx are rare tumours which constitute approximately less than 2 % of all laryngeal neoplasms[1]. Furthermore, chondrosarcomas involving the head and neck region form only 10% of all chondrosarcomas. [2] In a review of laryngeal chondrosarcomas at the Royal National Throat, Nose and Ear Hospital, London over a period of 24 years, only 12 cases were found. This represents the largest European series. [3] A literature review revealed that approximately 250 cases of laryngeal chondrosarcomas have been diagnosed since 1816 [4].

The male to female ratio is 4 to 1.[5,6] Chondrosarcomas mostly occur between 50 – 80 years of age with a peak in the seventh decade. [5]

Patients with laryngeal chondrosarcomas present clinically with hoarseness, accompanied at times with dyspnoea, dysphagia with or without a neck mass. [5] The dysphagia can be attributed to the involvement of the cricoid cartilage by the tumour.

Chondrosarcomas most frequently involve the cricoid cartilage (75-80%) followed by thyroid and epiglottic cartilages. [1,7]Radiologically, chondrosarcomas appear typically hypodense, well circumscribed masses containing mottled calcifications with smooth walls centred within the cartilage.

The definitive treatment of laryngeal chondrosarcomas has been a topic of debate. Preservation of laryngeal function with surgical eradication of the neoplasm is the preferred management [1,9,10,11]. Thome et al believe that total resection of cricoid cartilage with thyrotracheal anastomosis over a stent is an alternative technique to total laryngectomy in patients with chondrosarcomas. [4]

Wang et al state that conservative surgery should be attempted in most cases with total laryngectomy reserved for recurrent or large lesions. [8] Shinhar et al are of the opinion that every effort should be made to preserve laryngeal . [12] In a series published by Lewis, total laryngectomy was the primary treatment in six of their patients with chondrosarcoma. The decision to proceed with a total laryngectomy in our case was taken due to the extensive nature of the tumour and involvement of the medial wall of the pyriform fossa. There is a lack of evidence in the literature regarding the effectiveness of radiotherapy as a primary treatment modality.

In one case report, Dailiana et al used primary radiotherapy rather than surgery to treat a patient with laryngeal chondrosarcomas. The patient was free of disease at three years post-treatment.[13]

CONCLUSION

Laryngeal chondrosarcoma are rare tumours that commonly involve males in their seventh decade. The cricoid cartilage is commonly involved. Hoarseness and stridor. Surgery is the principal treatment modality. The extent of surgery depends on the site, size and extent of the lesion. The role of radiotherapy as a primary treatment modality needs further evaluation.

CORRESPONDENCE TO

Mr. Sandeep Berry 65 Marsam Road Westhoughton BL5 2GX Email : DOCSN@aol.com

References

1. Ferlito A; Nicolai P; Montaguti A et al. N. Chondrosarcoma of the larynx: review of the literature and report of three cases. Am J Otolaryngol 1984; 5: 350-359.
2. Burkey BB; Hoffman HT; Baker SR et al. Chondrosarcoma of the head and neck. Laryngoscope 1990; 100: 1301 - 1305.
3. Rinaldo A; Howard DJ , Ferlito A . Laryngeal chonrosarcoma: a 24 years experience at the Royal National Throat, Nose and Ear Hospital. Acta Otolaryngol 2000; 120(6): 680- 688.
4. Thome R; Thome DC, De La Cortina RA. Long term follow-up of cartilaginous tumors of the larynx. Otoaryngol Head Neck Surg 2001; 124: 634-640.

5. Lewis JE; Olsen KD, Inwards CY. Cartilaginous tumors of the larynx: clinicopathologic review of 47 cases. Ann Otol Rhinol Laryngol 1997; 106 : 94-100.
6. Uygur K; Tuz M; Dogru H et al. Chondrosarcoma of the thyroid cartilage. J Laryngol Otol 2001; 115: 507-509.
7. Gripp S; Pape H; Schmitt G. Chondrosarcoma of the larynx: role of radiotherapy revisited- case report and review of literature. Cancer 1998; 82: 108-115.
8. Wang SJ; Borges A; Lufkin RB et al. Chondroid tumors of the larynx: computed tomography findings. Am J Otolaryngol 1999; 20(6): 379-382.
9. Finn DG; Goepfert H, Batsakis JG. Chondrosarcoma of the head and neck. Laryngoscope 1984; 94: 1539-1544.
10. Neel HB, Unni KK. Cartilaginous tumors of the larynx: a series o 33 patients. Otolaryngol Head Neck Surg 1982; 90 :201-207.
11. Lavertu P, Tucker HM. Chondrosarcoma of the larynx. Case report and management philosophy.Ann Otol Rhinol Laryngol 1984; 93 : 452-456.
12. Shinhar S; Zik D; Issakov J et al. Chondrosarcoma of the larynx : a therapeutic challenge. Ear Nose Throat J 2001; 80(8): 568-570.
13. Dailiana T; Nomikos P; KapranosN et al. Chondrosarcoma of the Larynx : treatment with radiotherapy. Skeletal Radiol 2002; 31(9) : 547-549.

Author Information

Sandeep Berry, MRCS
Department of Otolaryngology, Southmead Hospital

Julia Addams-Williams, MRCS
Department of Otolaryngology, Southmead Hospital

Hisham Khalil, FRCS(ORL-HNS), MD
Department of Otolaryngology, Southmead Hospital

Sue Armstrong, FRCR
Department of Radiology, Southmead Hospital

Karen Denton, MRC(Path)
Department of Pathology, Southmead Hospital

David Baldwin, FRCS
Department of Otolaryngology, Southmead Hospital