Short Communication

Deliberate removal of incisor teeth to allow access for laryngoscopy


Abstract
This paper describes a clinical situation where it was impossible to obtain a biopsy of a lesion at the anterior commissure in a patient with progressive hoarseness of voice using standard microlaryngoscopy techniques. Due to anatomical difficulties and a histological suggestion of laryngeal papillomatosis the incisor teeth were deliberately removed to allow an adequate view of the larynx and to facilitate further access.

Key words: Laryngoscopy; Laryngeal Neoplasms; Papilloma; Tooth Extraction

Case report
A 49-year-old male was referred to the voice clinic with an 18-month history of progressive hoarseness of voice. He had previously been seen in another hospital and a microlaryngoscopy carried out there was reported as normal. Fibre-optic nasoendoscopy was very difficult due to a pronounced gag reflex, therefore the patient only tolerated a few seconds’ examination. Video-recording with freeze frame suggested a lesion at the anterior commissure and right vocal fold. There were no other associated symptoms and he was a non-smoker. Microlaryngoscopic examination of the larynx was very difficult due to the patient’s short neck with limited neck extension and prominent incisors. We were unable to obtain a full view of the larynx despite using a full range of laryngoscopes including anterior commissure, Lindholm and modified Benjamin laryngoscopes. A partial biopsy showed moderate dysplasia and malignancy could not be excluded.

Further biopsies performed under general anaesthetic using flexible bronchoscopy suggested respiratory papillomatosis. There was, therefore, the dilemma of a lesion at the anterior commissure that was probably laryngeal papillomatosis but might be malignant. A decision to remove the upper incisors to facilitate rigid laryngoscopy was made. Following the removal of the upper incisors, microlaryngoscopy and laser excision for laryngeal papillomatosis was performed and the histology confirmed benign papillomatosis. The patient was later fitted with a denture plate. Since the removal of his teeth, the patient has required six further laser excisions of his laryngeal papilloma.

Discussion
Direct laryngoscopy is indicated for evaluation of symptoms such as change of voice, persistent cough, dysphagia, difficulty in breathing or in a clinical situation where malignancy is suspected. The appropriate positioning of the patient and correct instrumentation is necessary for a successful direct laryngoscopy. Good exposure of the larynx may be obtained by the ‘sniffing the morning air position’, wherein the patient is placed in the supine position with the head extended on the neck and the neck flexed on the chest. Adequate visualization of the larynx, especially the anterior commissure region, may be hindered by a short neck, prominent teeth, cervical spine abnormalities, immobility of mandible or craniofacial abnormalities. In such cases a flexible bronchoscope with a side channel can be employed as a nasoendoscope for better visualization and biopsy. The extraction and re-implantation of teeth for difficult larynoscopy has been reported.

The inability to obtain an adequate view of the larynx is rare. This is the only case seen in over six years of laryngology practice and more than a thousand microlaryngoscopies.

The Zeitel’s laryngoscope was not used as it has only recently become available and it is a bulky laryngoscope if not employed with the correct Boston suspension apparatus. It is considered unlikely that this laryngoscope scope would have given better exposure than the endoscope employed.

The other options for therapeutic laryngeal surgery, such as laryngofissure or tracheostomy were contraindicated because of the risk of seeding the papillomas. The decision to remove the upper incisors and to fit a...
denture plate was made pre-operatively with the patient. The consenting process was relatively straightforward as the patient had already been subjected to three general anaesthetics, and no confirmed diagnosis made. The patient was very anxious to receive definitive treatment and as he was expected to undergo multiple laryngeal procedures in the future due to the recurrent nature of the disease he decided to accept the extraction of his teeth. The maxillofacial surgeons were involved to advise and replace the teeth with a prosthetic denture, the incisors were chosen as they would enable the most direct positioning of the endoscope to facilitate instrumentation of disease in the anterior commissure and also enabled an easier fit of the prosthesis. The patient has required further endoscopic procedures since.

References
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