

Granuloma of The Larynx Following Intubation

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Introduction:

ENDOTRACHEAL INTUBATION has been known to produce various local complications, one of which is post-intubation granuloma, first described by Clausen in 1932. Howland and Lewis (1956) estimated it occurred once in every 800 to 1,000 cases of intubation. Although endotracheal intubation has become a commonly used method of establishing and insuring an effective airway since its introduction into anaesthesia by Elsberg in 1910, a review of the literature showed only few reports of post-intubation granuloma. Many cases might be missed unless specific questions are asked and the larynx examined post-operatively.

Case One:

O.L.S., a 34 years old Chinese housewife was first seen in May 1975 with a complaint of a low pitched hoarse voice since she had a General Anaesthesia for Caesarean Section 2½ months earlier. She was unable to sing.

The only significant abnormality found on indirect laryngoscopy was a small granulation tissue seen on the anterior 1/3 of her left true vocal cord. On direct laryngoscopy and removal, it measured 0.2 cm x 0.5 cm x 0.3 cm and histological examination confirmed the finding of granulation tissue. Her voice has become normal since the removal.

Case Two:

B.A.M., a 38 years old English housewife, was referred to the ENT clinic on May 1975. She complained of hoarseness after vomiting with migraine 4 weeks earlier. She has regained her

usual voice during the visit. Upon specific questioning, she admitted she has a slight change in her voice since she had a General Anaesthesia for hysterectomy 3 years ago, but she did not pay much attention to it.

On indirect laryngoscopy, a typical laryngeal granuloma was seen on the posterior aspect of her left true vocal cord, it was sessile and arose from the vocal process of the left aryteroid. Upon removal, it measured 1 cm x 0.4 cm x 0.4 cm and proved to be granulatous tissue on histological examination. Her voice has improved since the removal.

Discussion:

The significant of duration of the tube in the larynx seems to have been over-rated in the production of post-intubation granuloma. Wylie (1950) reported a case of post-intubation granuloma, discovered 3 weeks after tonsillectomy (a 15 minutes operation). Bergstrom (1964) described 3 cases of post-intubation granuloma of considerable variations in the duration of intubation (1 hour to 39 hours). He had earlier reported an incidence of one in 176 cases of prolonged intubation (Bergstrom, 1962). He considered epithelial scarring of the vocal cord during intubation to be the principal reason for formation of granuloma. The period of intubation varied from ½ to 4 hours in our cases.

Both our cases are females; post-intubation granulomas are known to occur more common in female than in male. Howland and Lewis (1956) reported a ratio of 7 to 1 in favour of female. They

attributed the higher incidence in female to smaller larynx and mucosa of true cord to be approximately half as thick as in male.

Classically post intubation granulomas are invariably found on the vocal process of the arytenoids (Epstein and Winston, 1957). However, in the 50 cases reported by Howland and Lewis (1956) 3 were found to be on anterior 1/3 of the true vocal cord, 10 middle 1/3 and 37 vocal process of the arytenoids. Our case one of granuloma in the anterior 1/3 of the cord, tends to support Howland and Lewis' results.

Although the incidence of post-intubation granulomas is low, patient with laryngeal symptoms following intubation should be examined by laryngologist to establish its diagnosis. Case two was diagnosed 3 years after intubation. Early treatment with voice test and anti-biotics may favour regression of granuloma (Bergstrom, 1964). However, the main treatment is by careful removal and histological examination to exclude malignancy.

Summary:

- (1) Two cases of post-intubation granulomas are described.
- (2) Short duration of intubation may cause granuloma, in contrast to the popular belief that it recurs only in prolonged intubation.
- (3) Post-intubation granulomas occur more commonly in females.
- (4) Post-intubation granulomas may be found at any site of the true vocal cord, though it is commonest at the vocal process of the arytenoid cartilage.
- (5) Patient with laryngeal symptom after intubation should be seen early to establish diagnosis and treatment.

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