OSCE
Pharynx

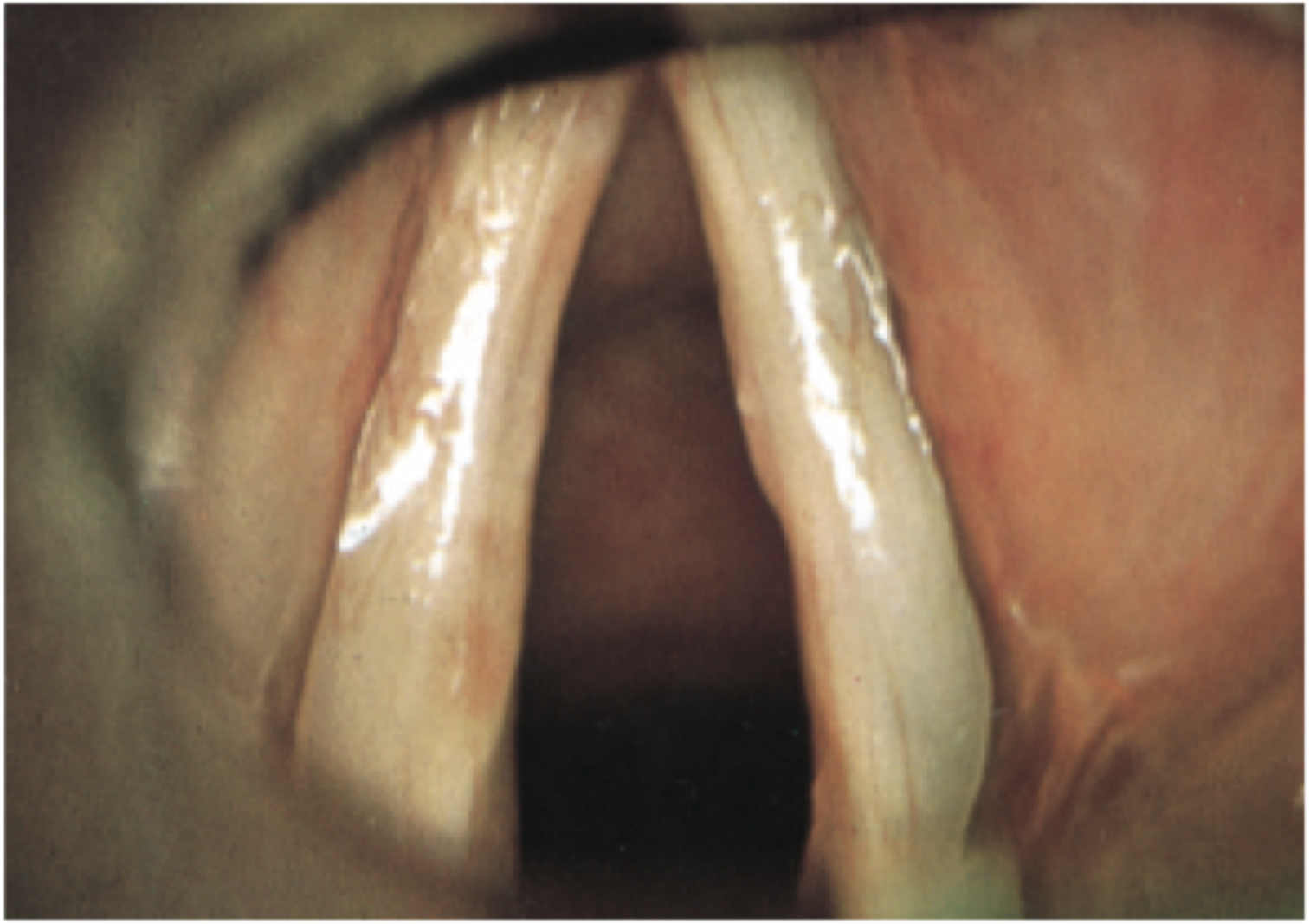


Fig. 4.**69** **Normal vocal cords.** These are ivory-colored and smooth with few vessels on the surface. This is the view obtained through a laryngoscope at direct microlaryngoscopy.

Fig. 4.70 **A fiberoptic endoscopic view of a normal larynx** (see Fig. 1.62).

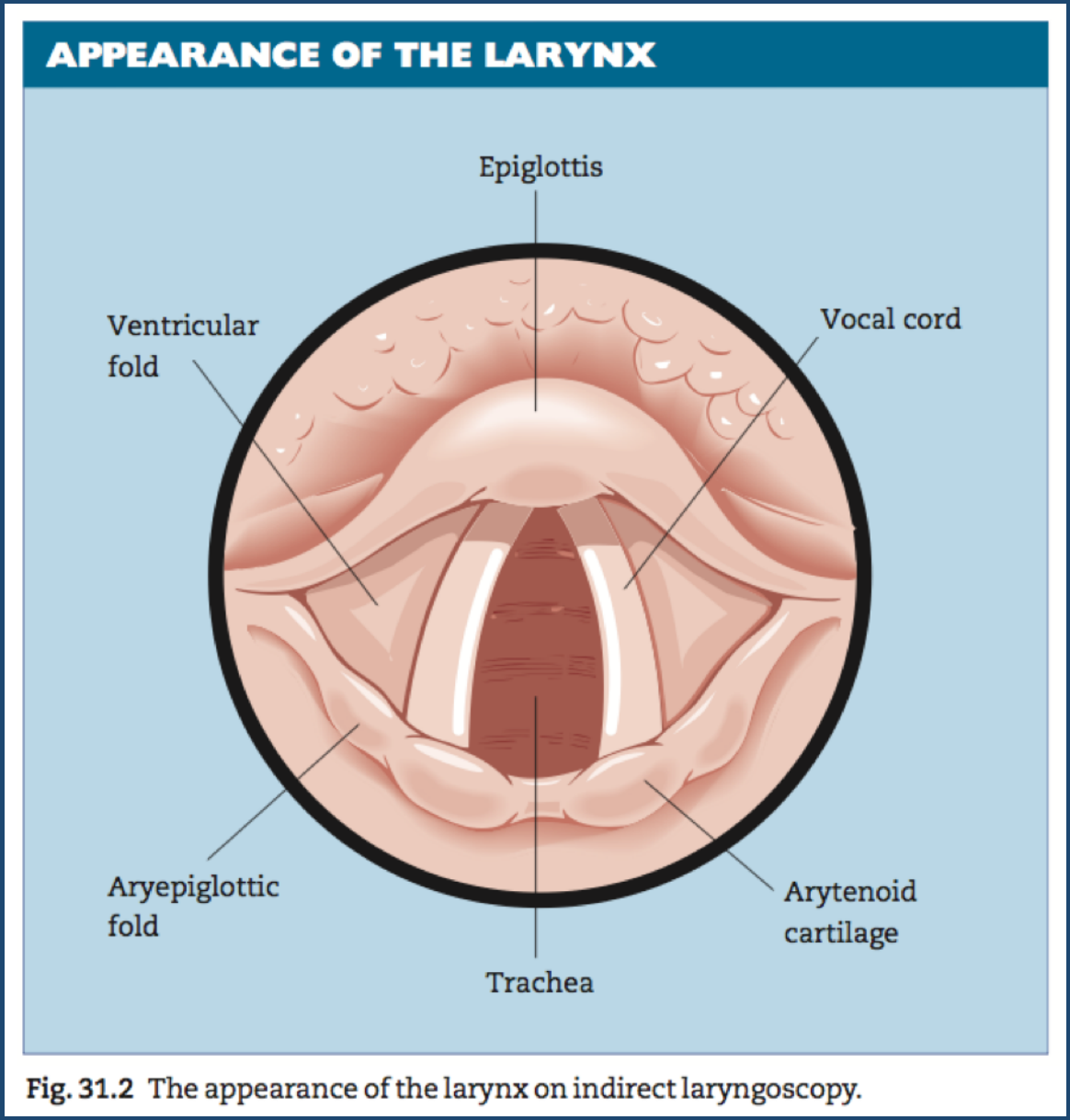
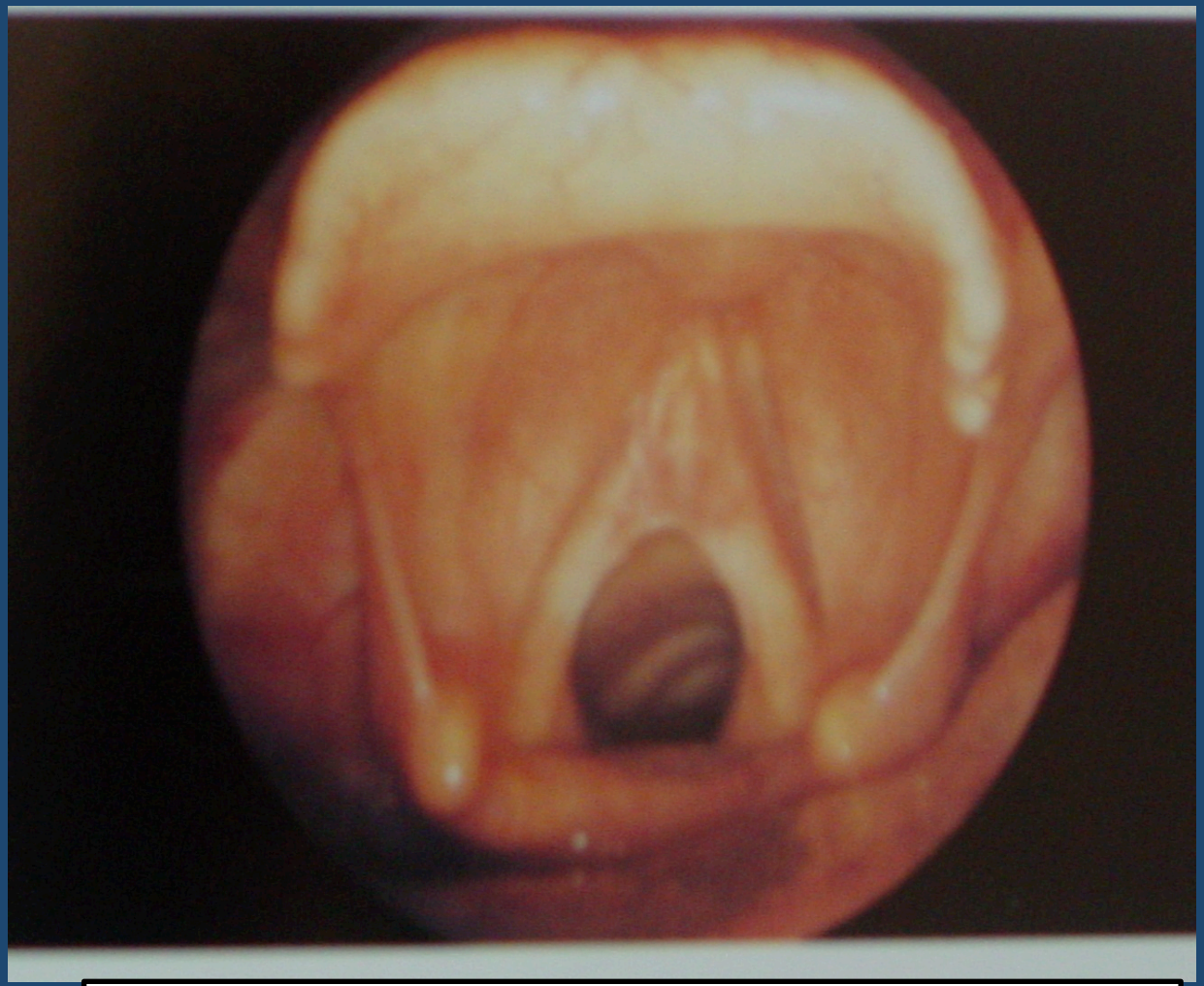


Fig. 31.2 The appearance of the larynx on indirect laryngoscopy.

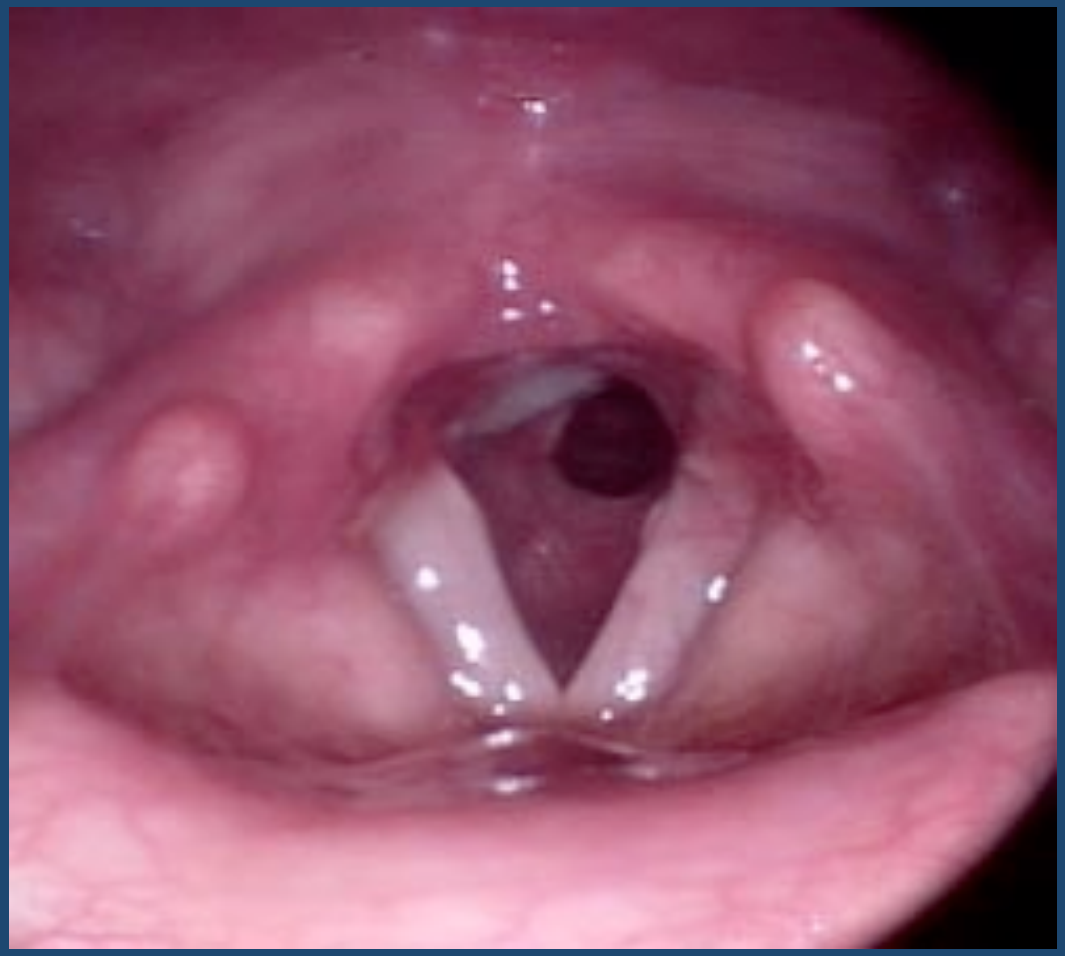
Fig. 31.3 The appearance of the larynx as seen by direct laryngoscopy.

Fig. 4.**71** **A laryngeal web.** Congenital abnormalities of the larynx are uncommon. Webbing of varying degrees of severity is one of the commoner developmental abnormalities, and presents as hoarseness. Similar webbing may follow inadvertent trauma at endoscopic surgery to both vocal cords near the anterior commissure. A mucosal web is treated with surgical division. Most webs, however, are deep and fibrous and need an indwelling "keel" after division to avoid recurrence.

Fig. 37.5 Anterior laryngeal web.



Congenital Webs. Most commonly anteriorly based. Commonly associate symptoms include aphonia and stridor.



Congenital subglottic stenosis. 3 different types; membranous, cartilaginous or mixed.

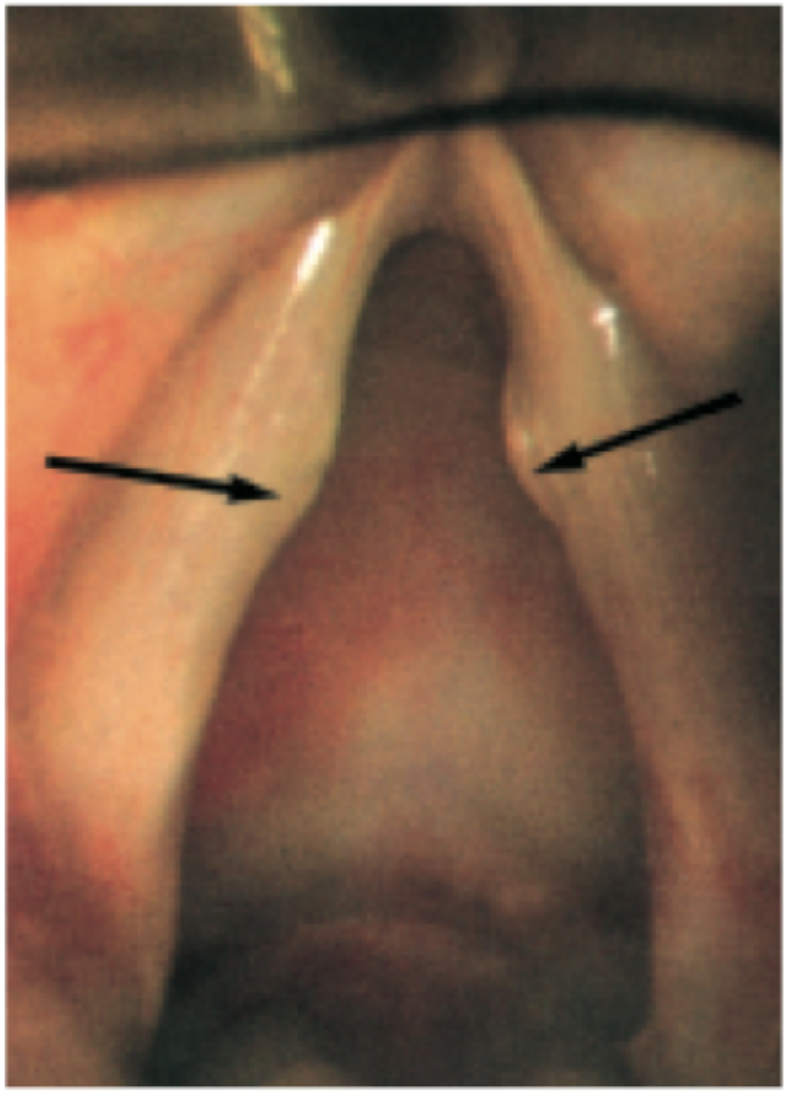


Fig. 4.**72** **Laryngeal nodules** (arrows). A specific and localized type of chronic laryngitis, often seen in professional voice users, is laryngeal nodules (***singer's nodules***). Initially an edema is seen on the vocal cord between the anterior one-third and posterior two-thirds of the cord. Removal of the nodules may be necessary, but attention to the underlying voice production by a speech therapist is the most important aspect of treatment. These nodules are not an uncommon cause of hoarseness in children, particularly of large families involved in competitive shouting (***"screamers" nodules***). Vocal cord nodules are also seen in those who overuse or misuse their voices.

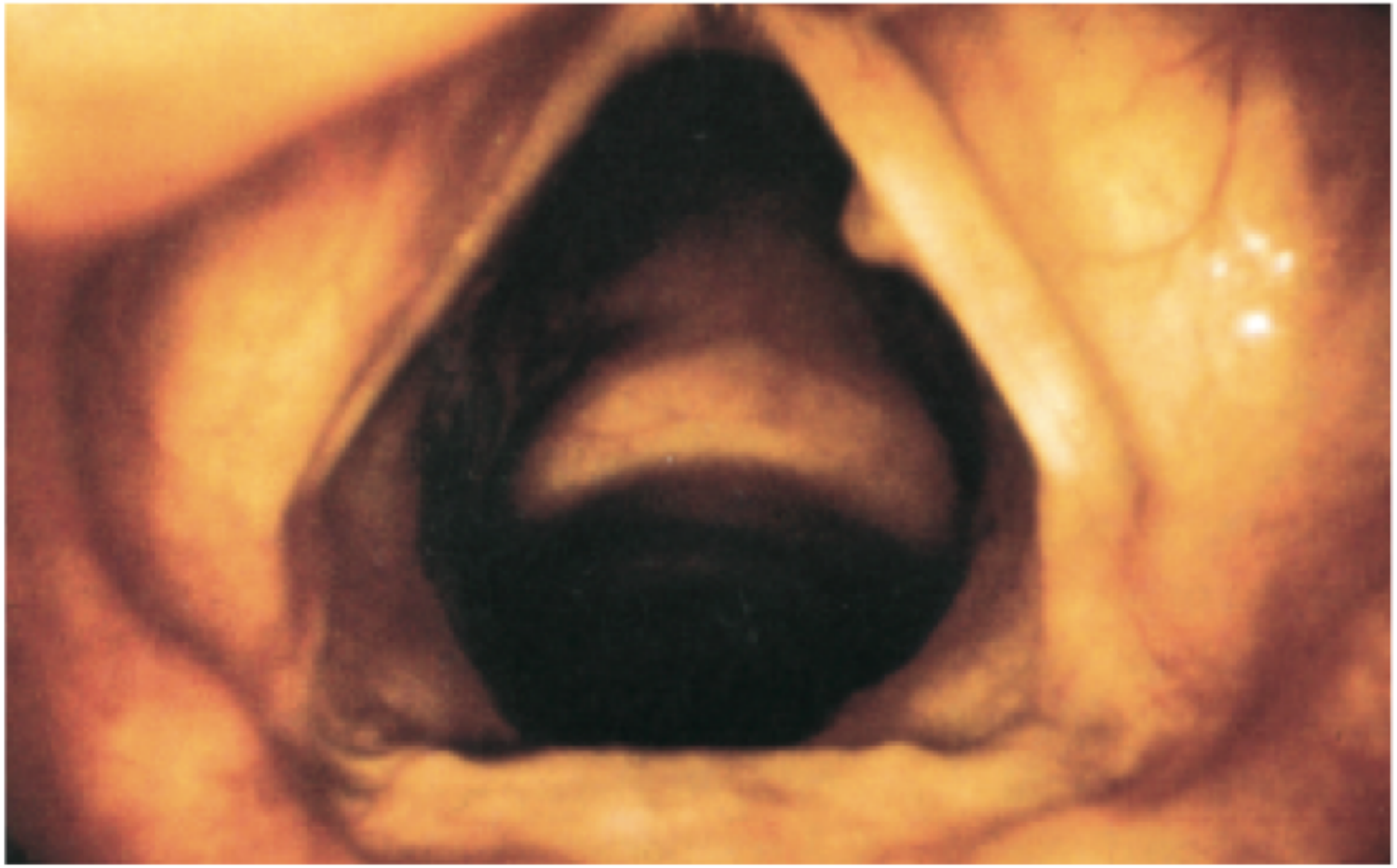


Fig. 4.73 **Vocal cord nodule** seen through a fiberoptic endoscope. A solitary vocal cord nodule at the characteristic site is not uncommon, although they are usually bilateral and fairly symmetrical.

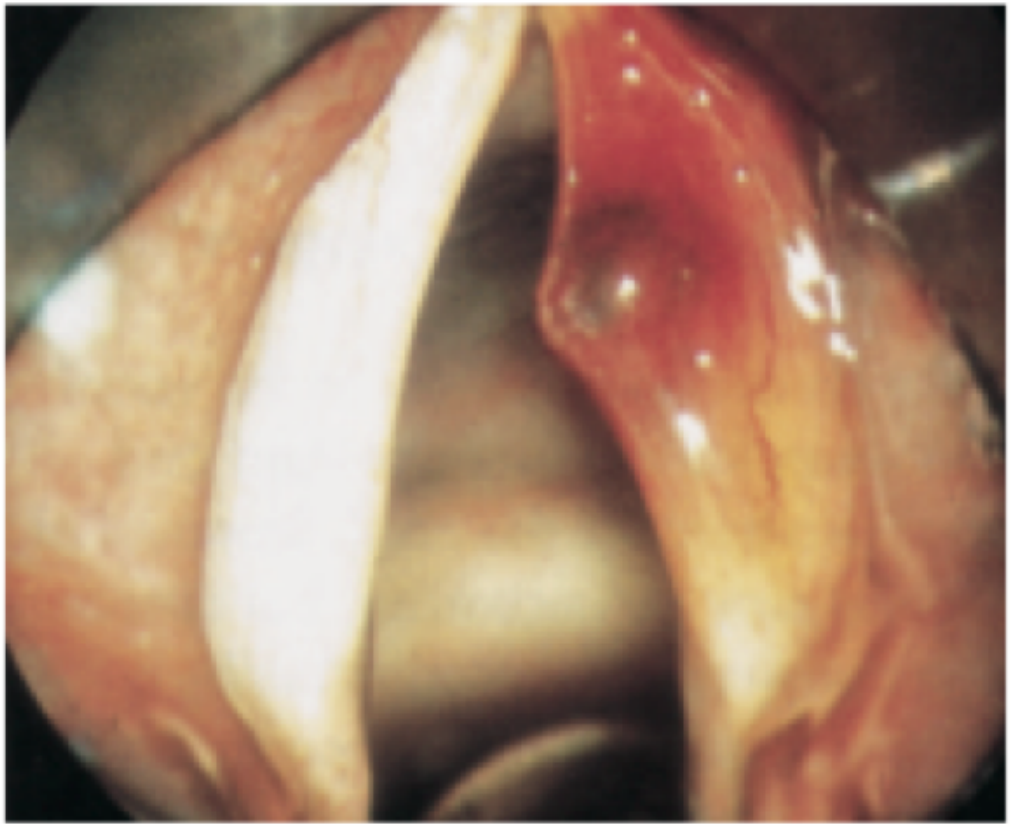


Fig. 4.**74** **Vocal cord nodule with hematoma.** A vocal cord nodule with hematoma formation following vocal abuse.

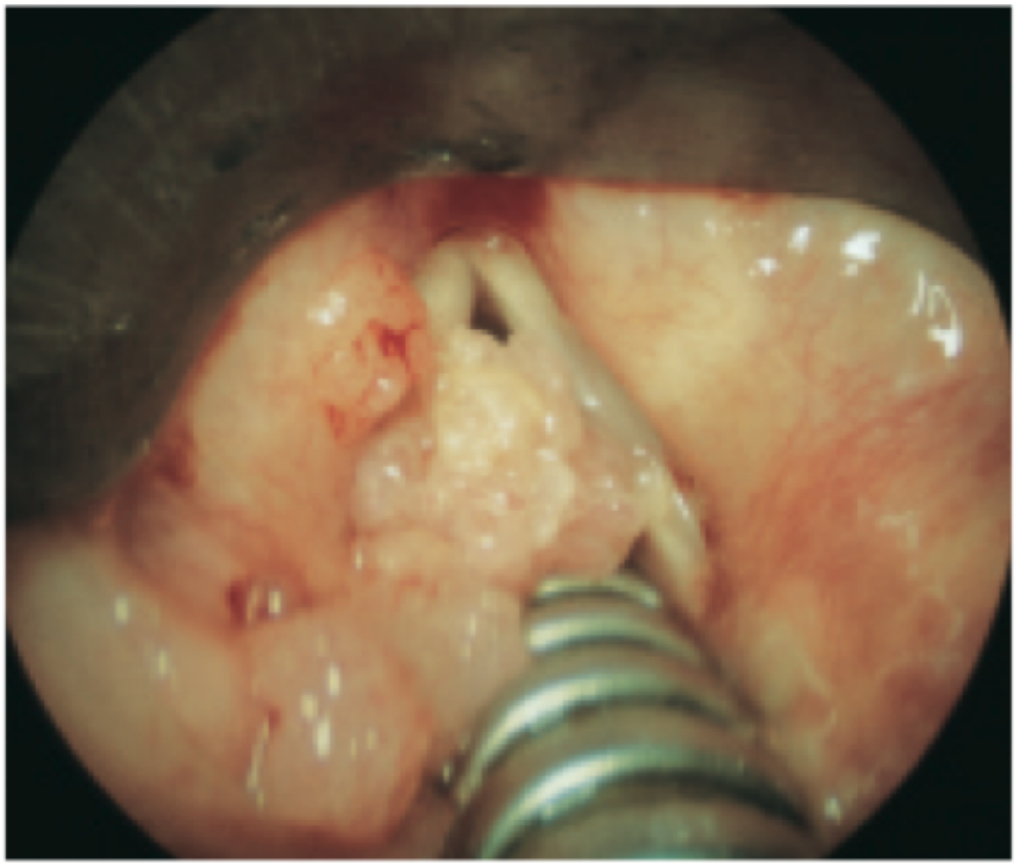


Fig. 4.75 **Juvenile laryngeal papilloma.**

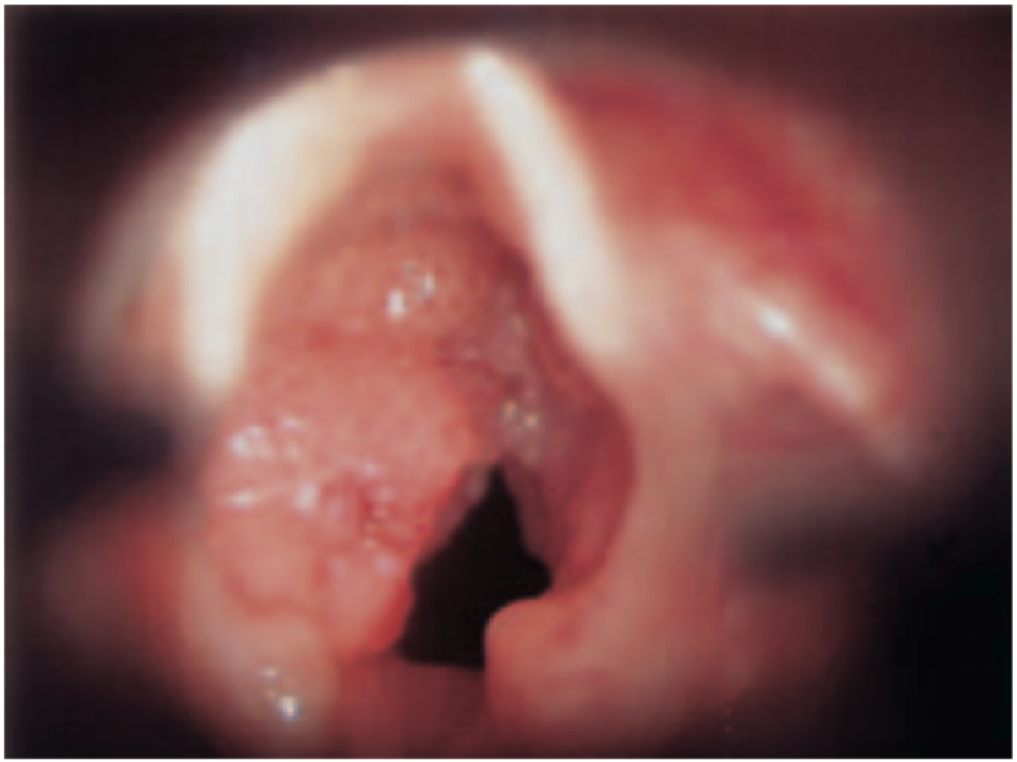


Fig. 37.9 A large mass of papillomata on the left vocal cord.

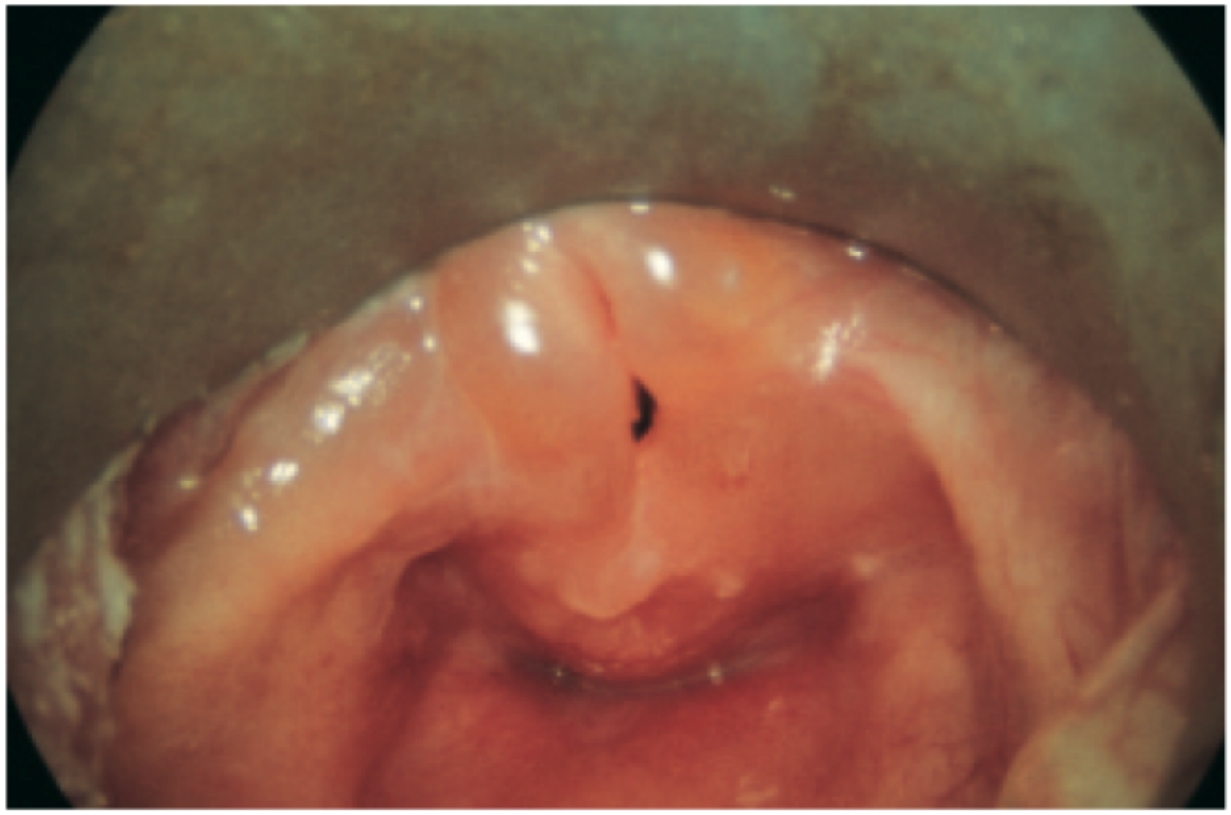


Fig. 4.**76** **Laryngomalacia.** This is the commonest cause of stridor in infants. The epiglottis is curled ("omega-shaped") and tightly tethered to the aryepiglottic folds, which are tall and floppy, resulting in supraglottic collapse on inspiration.

Diagnosis can usually be established from the history and confirmed by awake flexible fiberoptic laryngoscopy.

Most cases are mild, no treatment is necessary, and the stridor gradually fades, resolving completely by about age 2. However, 10% of cases are severe with failure to thrive (and often associated gastroesophageal reflux). In these patients an endoscopic aryepiglottoplasty may be required to release the epiglottis and reduce the aryepiglottic folds.

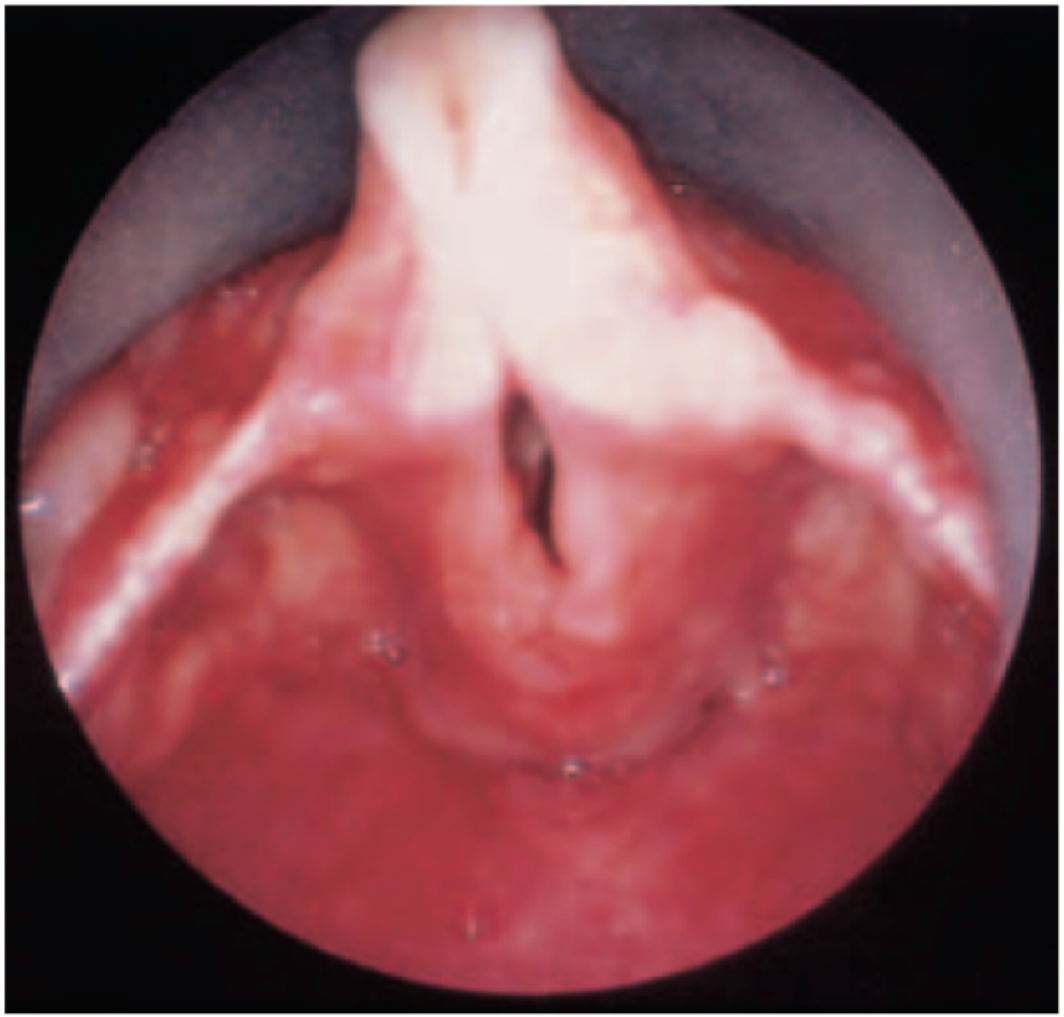
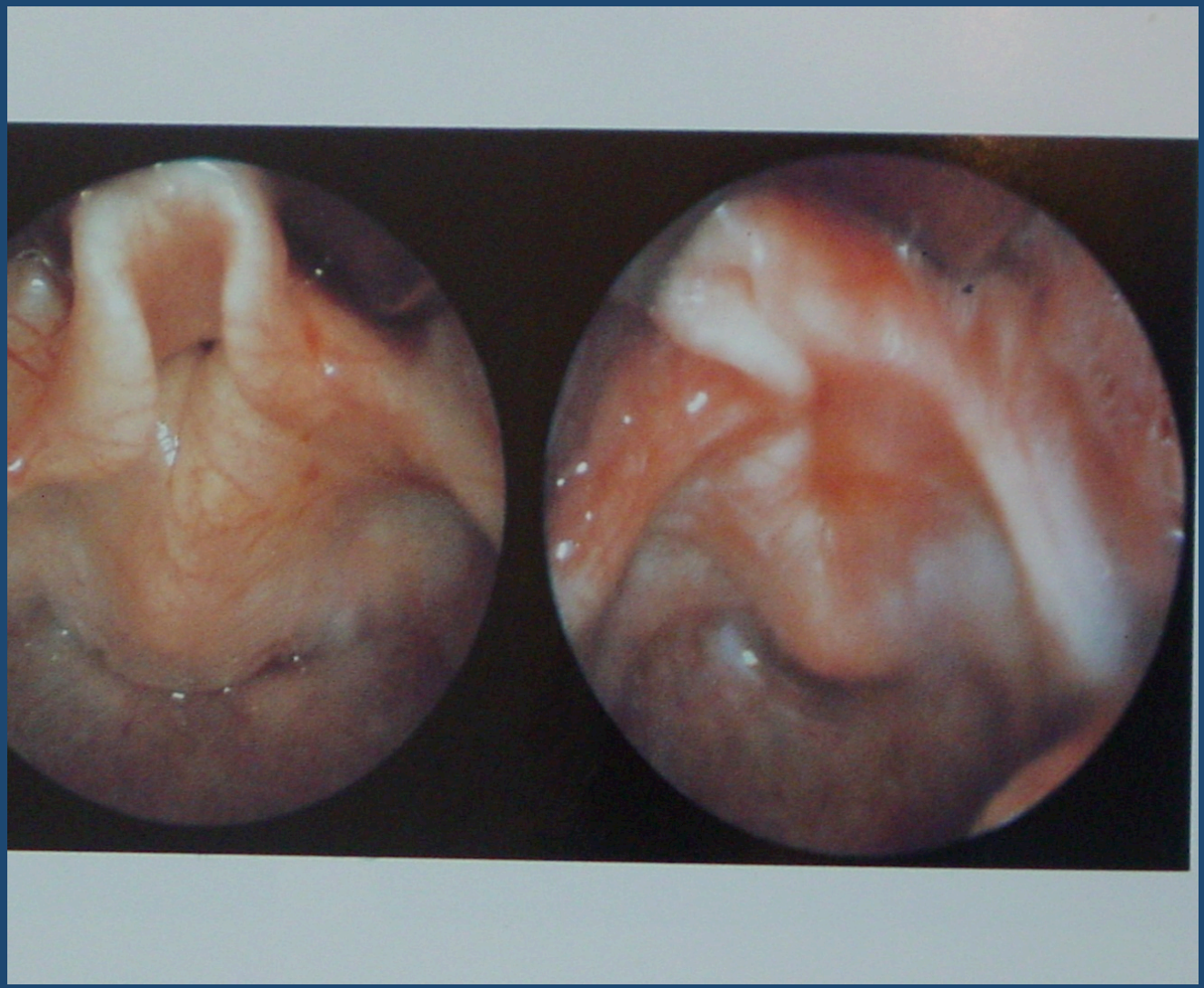


Fig. 37.4 Laryngomalacia. Note the insuction of the supraglottic structures, causing airway narrowing.



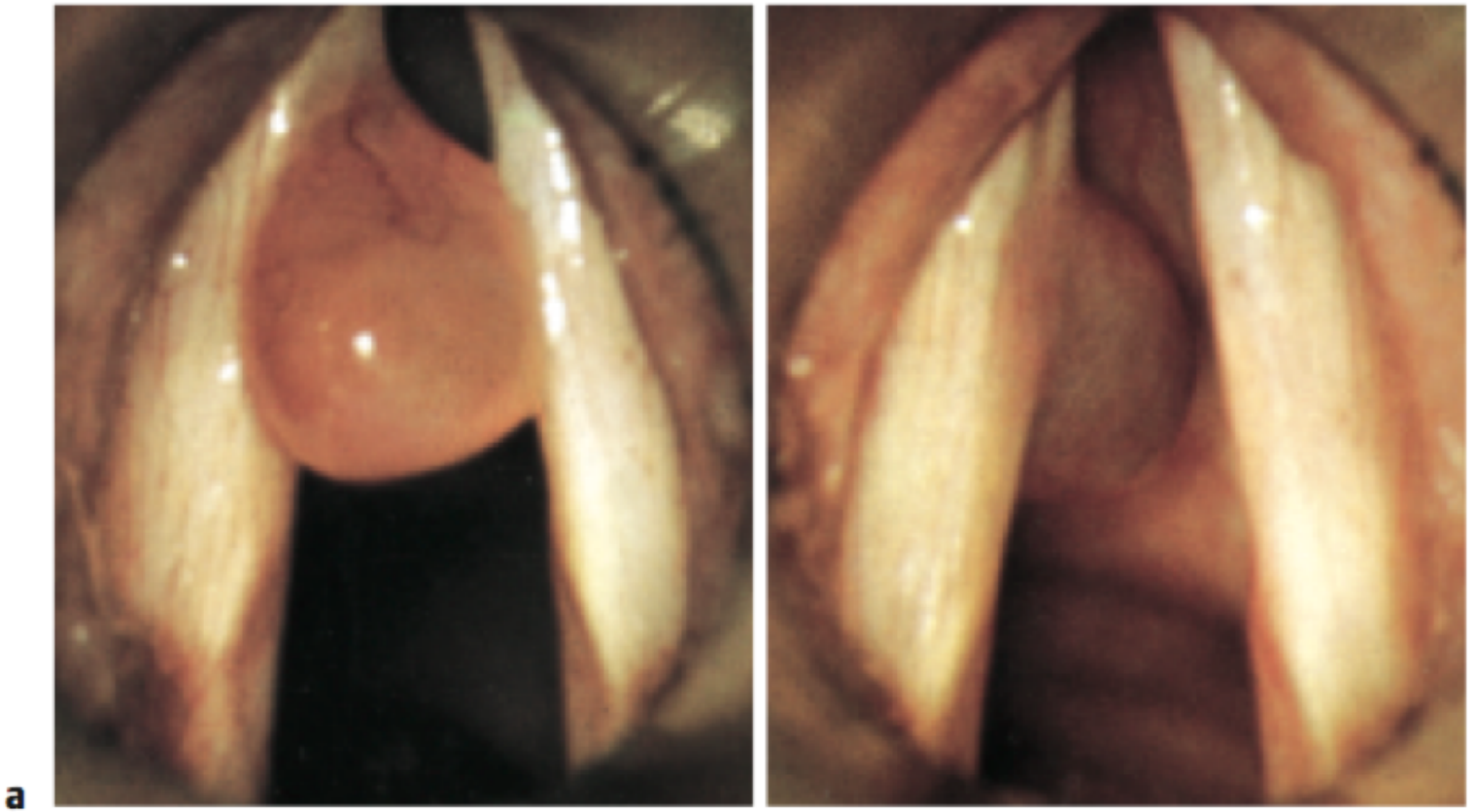


Fig. 4.77 **Pedunculated vocal cord polyp.** A large pedunculated polyp may form on the vocal cord and be missed on examination for it moves above and below the cord on expiration and inspiration. A large polyp (**a**) is less apparent (**b**) when it is below the cord on inspiration.

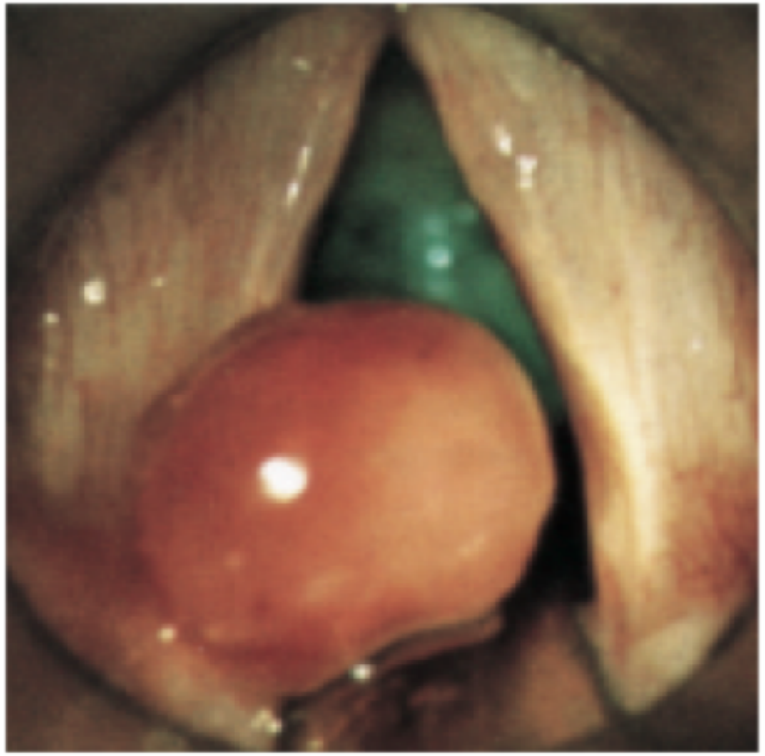


Fig. 4.**78** **Intubation granulomas of the larynx.** These result from trauma by the anesthetic tube to the mucosa overlying the vocal process of the arytenoid; they are, therefore, posterior. With the skill that anesthetists have achieved for endotracheal intubation, trauma to this region is uncommon. Granulomas at this site also develop after prolonged vocal abuse has caused a chronic laryngitis in which the epithelium over the vocal process becomes ulcerated ("contact ulcers"). Removal at the pedicle is necessary.

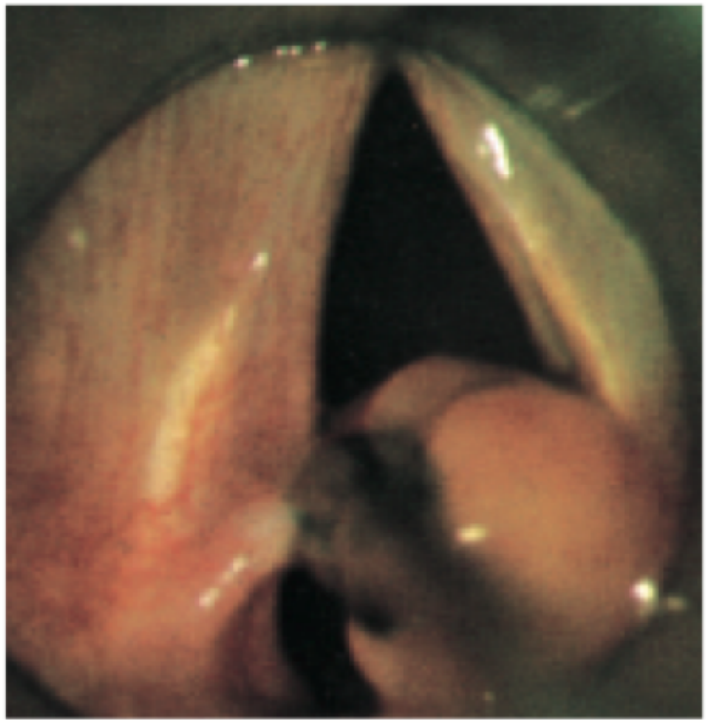


Fig. 4.**79** **Granulomas of the larynx excision.** Here the pedicle of the intubation granuloma is being held with forceps. Recurrence frequently follows excision, but laser beam techniques appear to lessen the likelihood. Relatively large lesions can occupy the posterior half of the larynx with minimal voice change. Anteriorly in the larynx, however, small lesions cause conspicuous voice change.

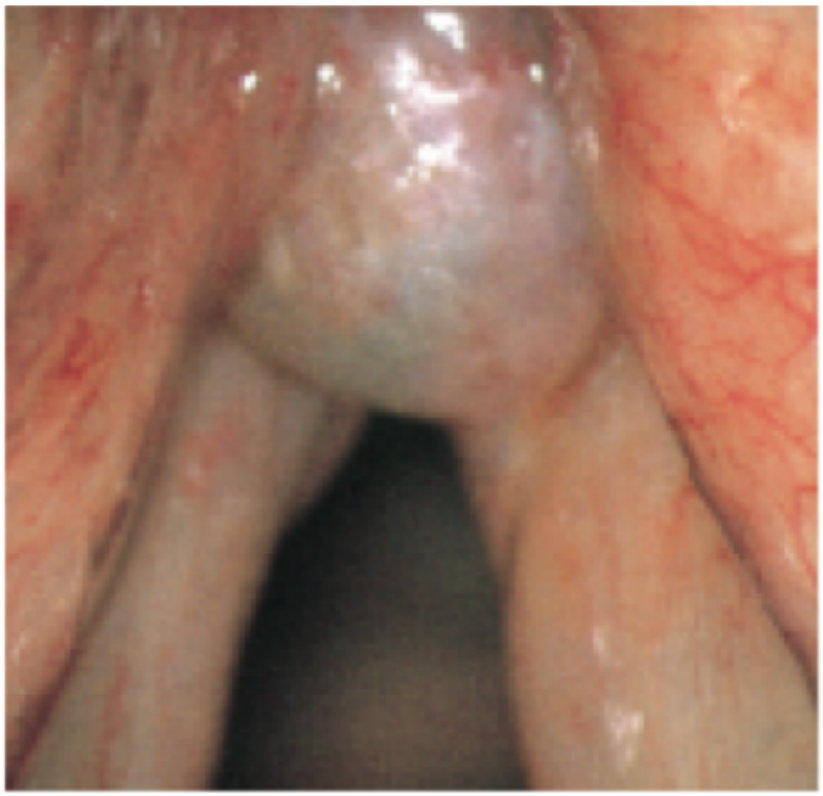


Fig. 4.**80** **Polyp at the anterior commissure.** This site is not always easy to see on indirect laryngoscopy for it may be partly obscured by the tubercle of the epiglottis. The laryngoscope is placed against the tubercle, displacing it forwards and a clear view is obtained.

A small lesion near or at the anterior commissure of the larynx may produce conspicuous hoarseness. However, a larger lesion posteriorally in the larynx may not produce such a conspicuous voice change.

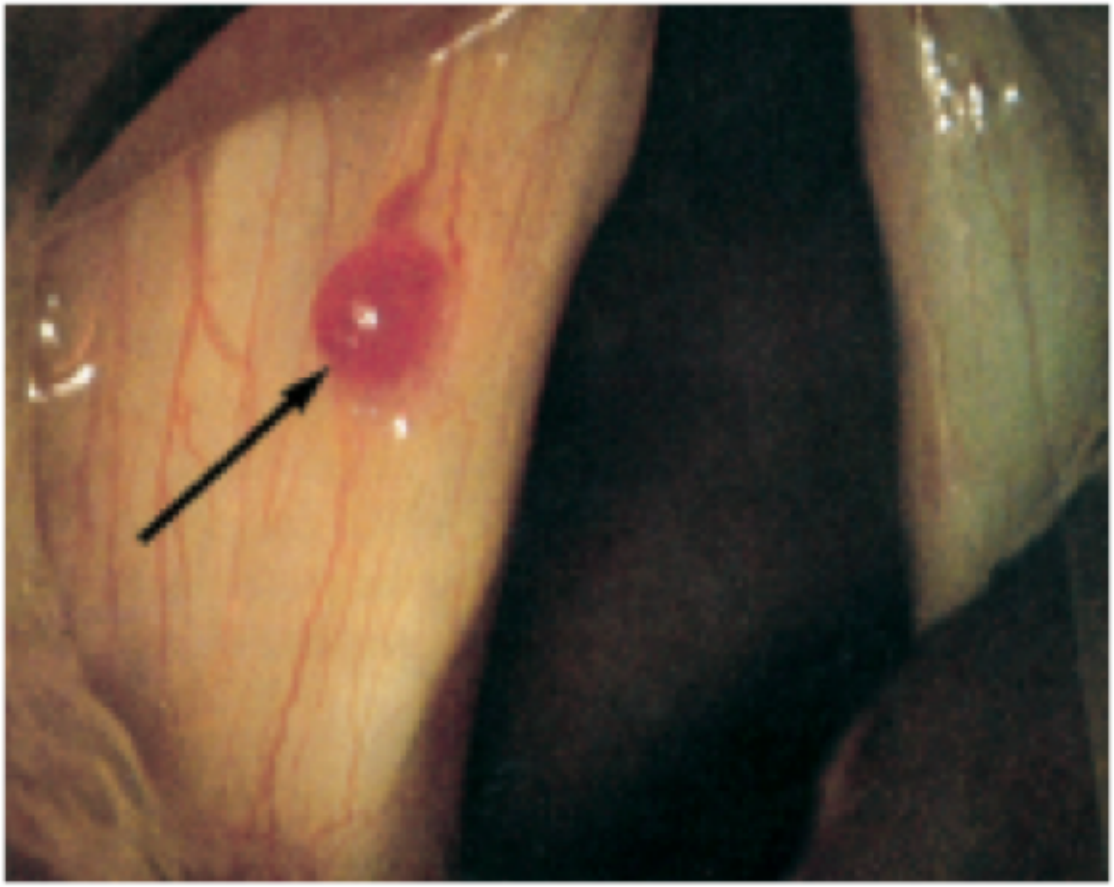
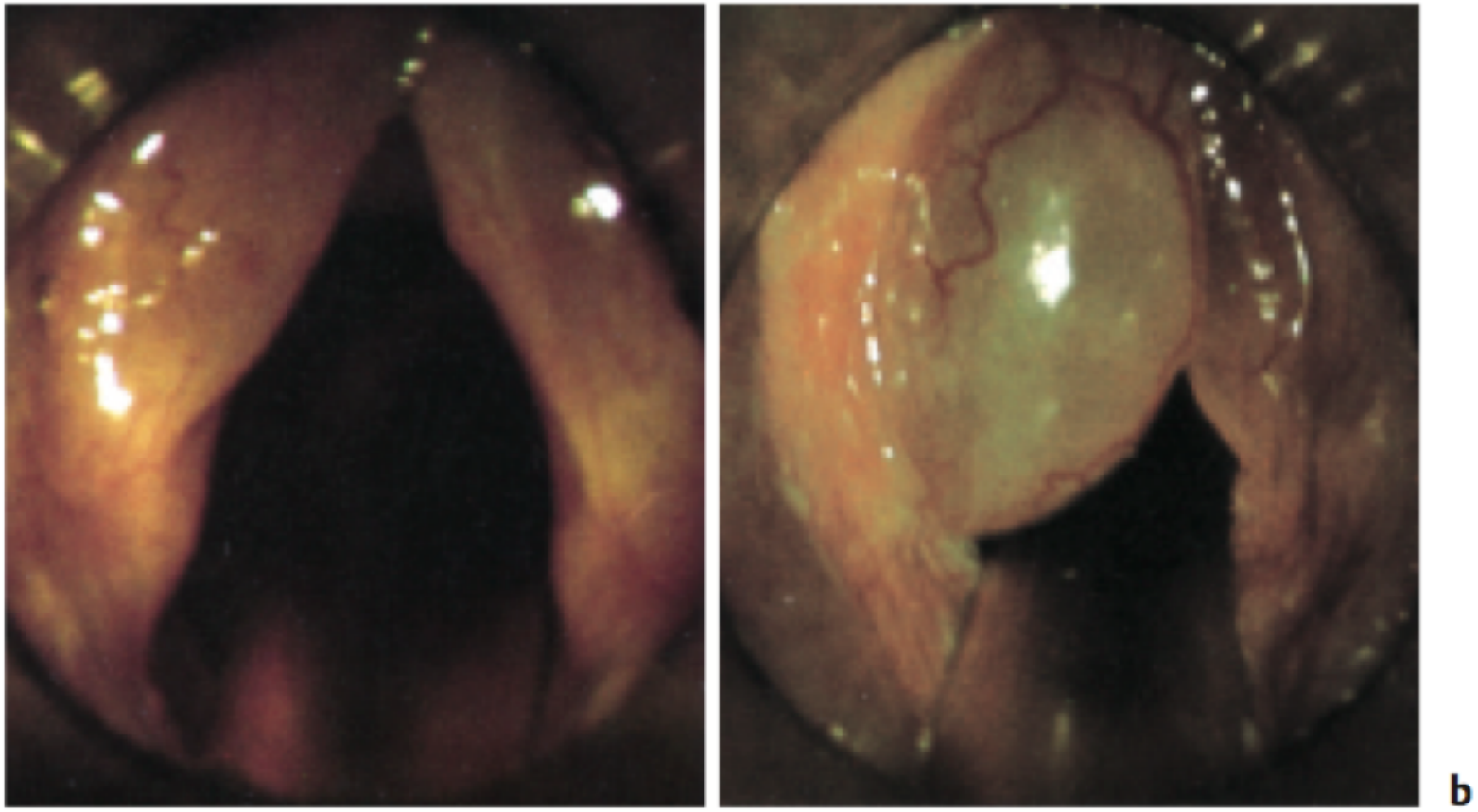


Fig. 4.**81** **Hemangiomas** (arrow). These are uncommon vocal cord lesions and if small may cause no hoarseness or bleeding, and be a chance finding on examination. Laser surgery promises to be the effective treatment for larger hemangiomas.

These hemangiomas may be associated with similar lesions in the head and neck in children (Figs 3.**4a,b**).

Fig. 4.**82** **Acute laryngitis** showing slight hyperemia and edema of both vocal cords seen with the fiberoptic endoscope.



a b

Fig. 4.**83a, b Chronic laryngitis.** With this condition, hyperemia of the mucous membrane may be associated with other changes in the larynx. Edema of the margin of the vocal cords is common (Reinke's edema), so that the free margin is polypoid and a large sessile polyp may form. The edema, although affecting both cords, may be more marked on one side (**b**).

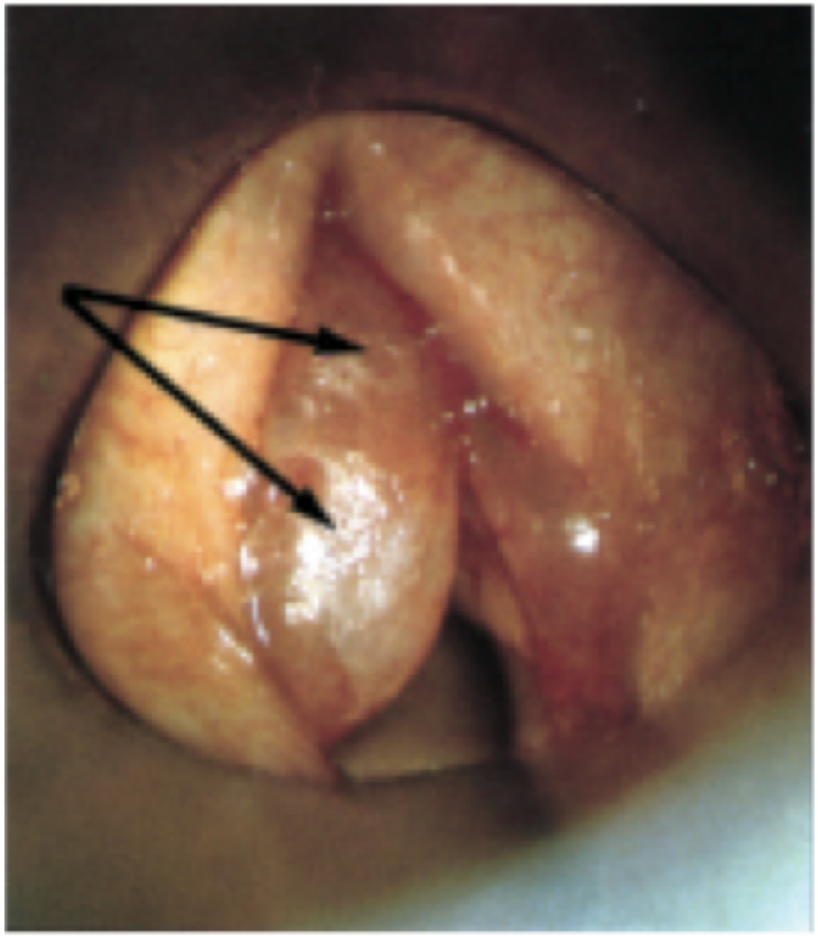


Fig. 4.**84** **Hypertrophy of the ventricular bands.** Hypertrophy of the ventricular bands is another finding in chronic laryngitis and they may meet in the mid-line on phonation, producing a characteristic hoarseness. Reinke's edema is also present. Microlaryngoscopy and surgical excision of the edematous margins is effective with dissection or the laser beam. Excision to the anterior commissure is made on one cord only to avoid webbing.

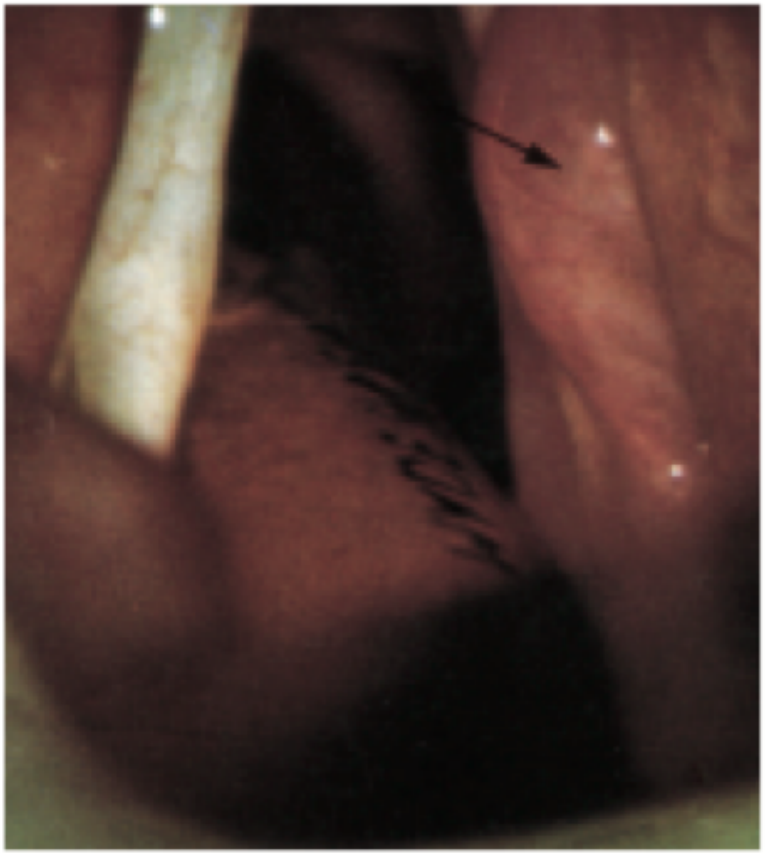


Fig. 4.**85** **Prolaps of the ventricular mucous membrane.** This may also occur in chronic laryngitis and presents as a supraglottic swelling. A supraglottic cyst or carcinoma must be excluded.

Fig. 4.**86** **Long-standing chronic laryngitis.** The mucous membrane may become extremely hypertrophic with white patches (leukoplakia). Histologically, the white patches represent areas of keratosis which may precede malignant change and be reported as carcinoma in situ. This patient had smoked over 60 cigarettes a day for 50 years.

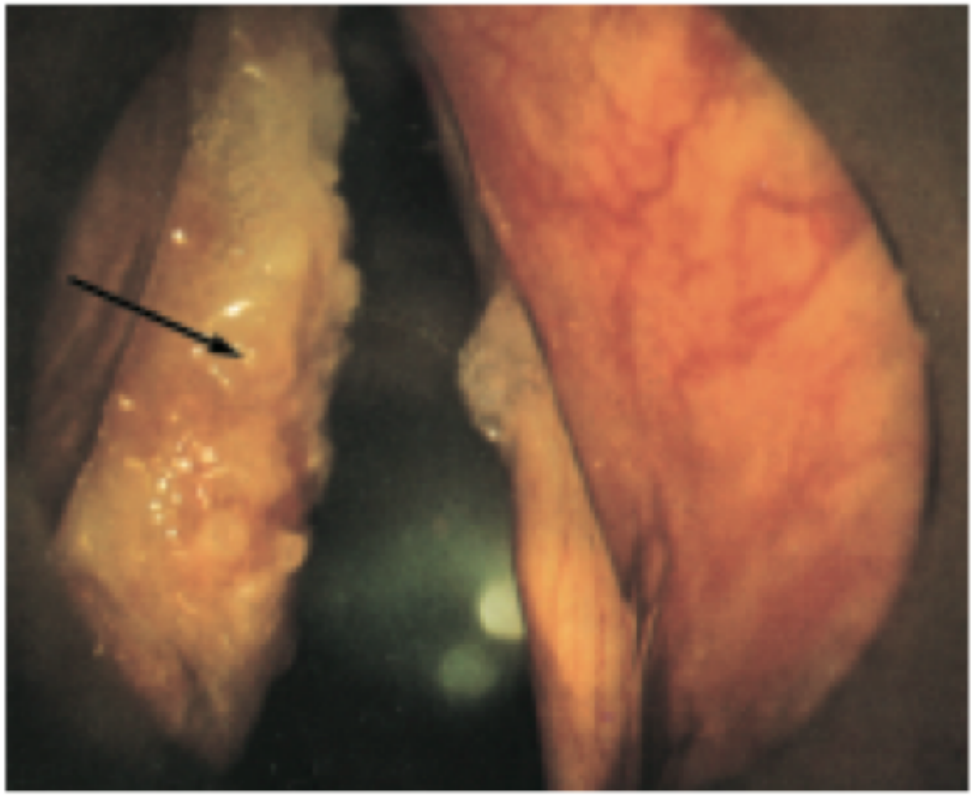


Fig. 4.87 **Carcinoma of the vocal cord.** This usually occurs in smokers. The indurated leukoplakia on this vocal cord (arrow) is a well-differentiated squamous cell carcinoma that has arisen as a result of chronic laryngitis with hyperkeratosis.
The prognosis for vocal cord carcinoma with radiotherapy is excellent, with a cure rate of over 90% for early lesions. The voice returns to normal, as does the appearance of the vocal cord.

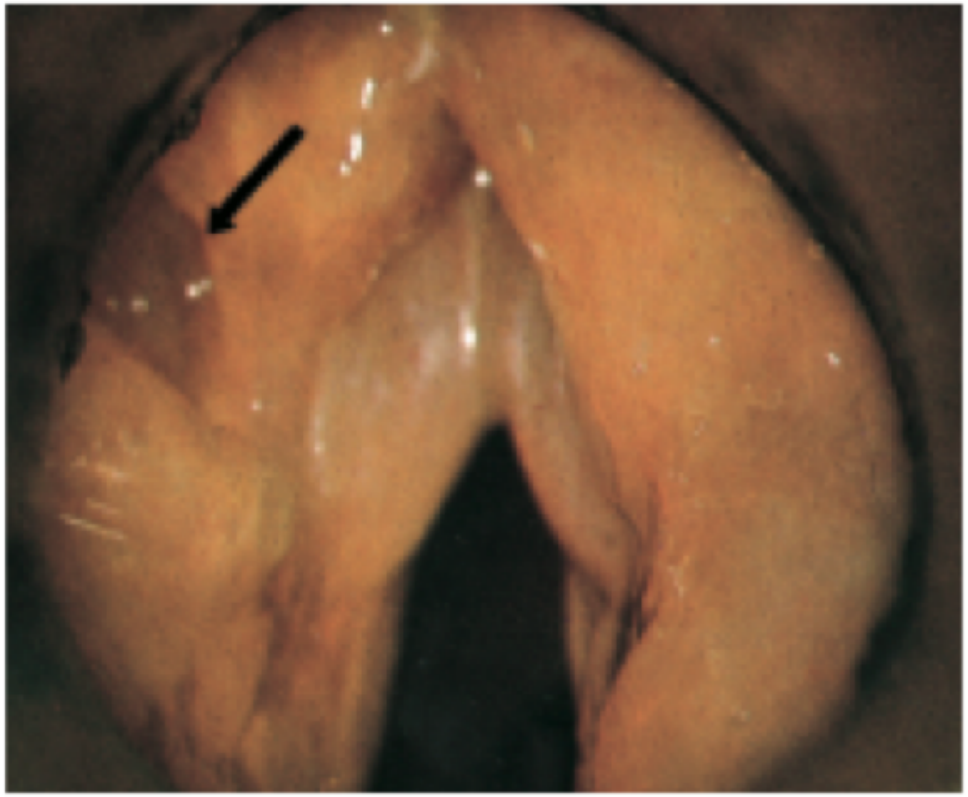


Fig. 4.88 **Supraglottic squamous cell carcinoma.** Carcinoma of the larynx commonly involves the vocal cord (glottic carcinoma), but lesions may develop below the cord (subglottic) or above the cord (supraglottic). The ulcerated area of granulation tissue above the edematous vocal cord in this case is a squamous cell carcinoma.

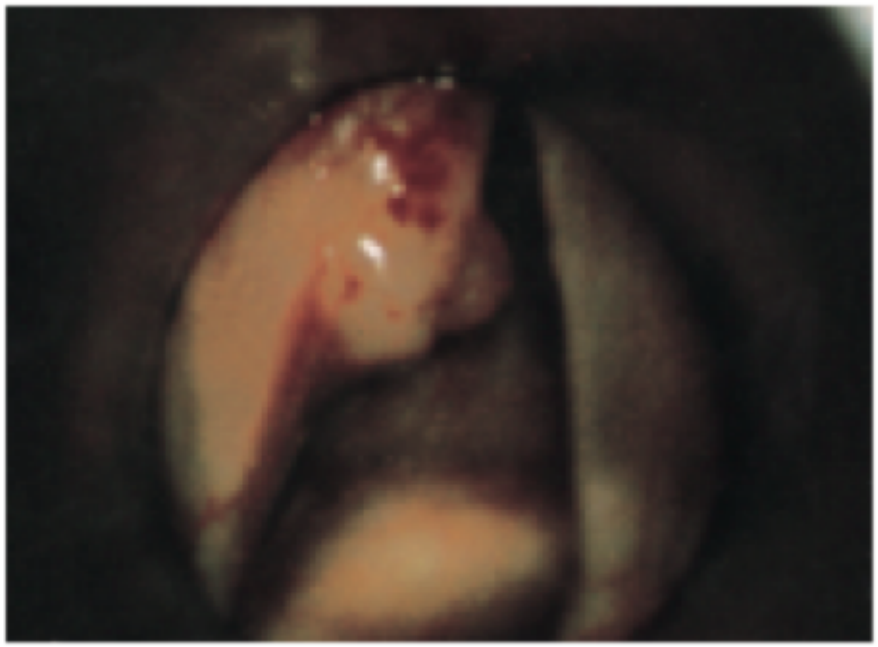


Fig. 4.**89** **Subglottic squamous cell carcinoma.** The prognosis for supraglottic and subglottic carcinoma is worse than for glottic carcinoma, for hoarseness is delayed until the cord is involved and the greater vascularity and lymphatic drainage above and below the cord predisposes to earlier metastasis.

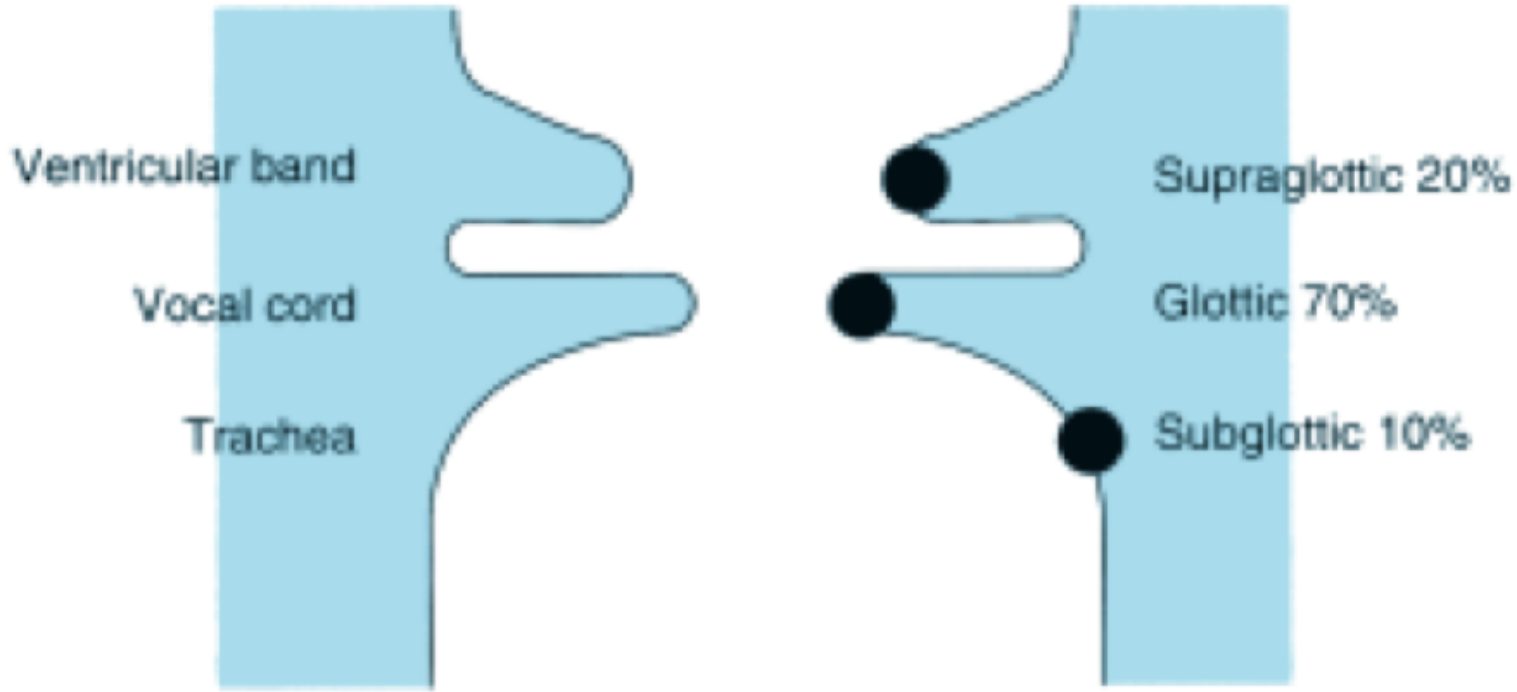


Fig. 4.90 **Carcinoma of the larynx.** 70% of laryngeal carcinomas affect the vocal cords.

Fig. 4.92 **Total laryngectomy with left radical neck dissection.**

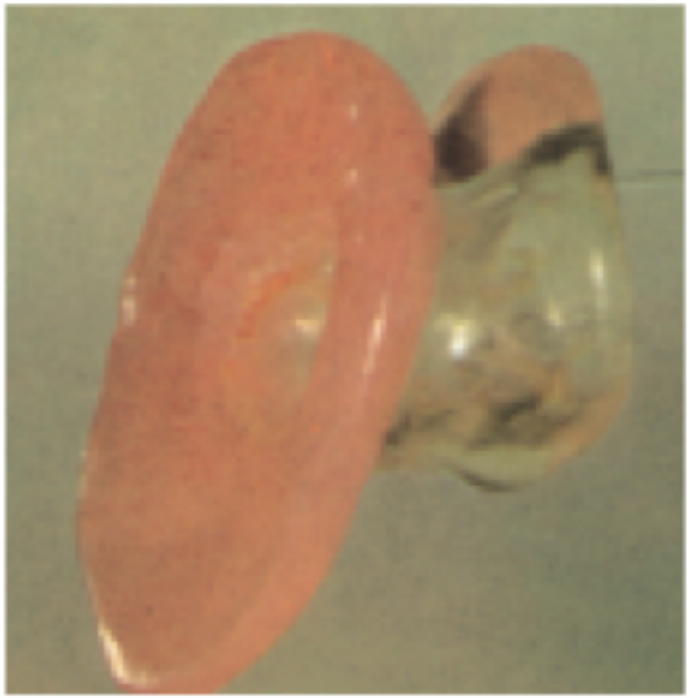


Fig. 4.93 **Stomal stud.** Stenosis of the tracheosteome is sometimes a postoperative problem, and a small stomal stud can be used.

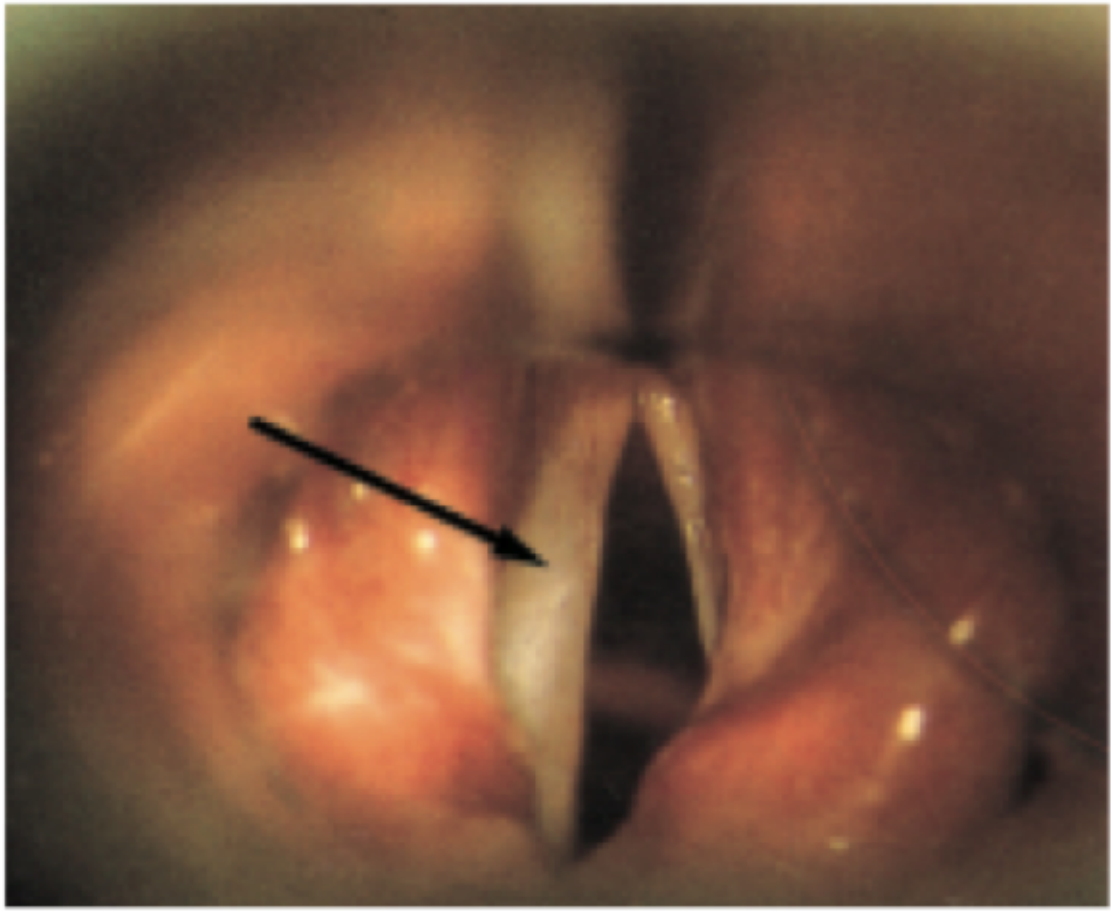


Fig. 4.**97** **Left vocal cord palsy.** The paralyzed vocal cord is seen to lie near the mid-line (arrow) and undergoes no movement on phonation at indirect laryngoscopy (see Fig. 1.**61**). The paralyzed vocal cord is seen to fall medially towards the mid-line and inferiorly, so it is below (inferior to) the cord with normal movement.

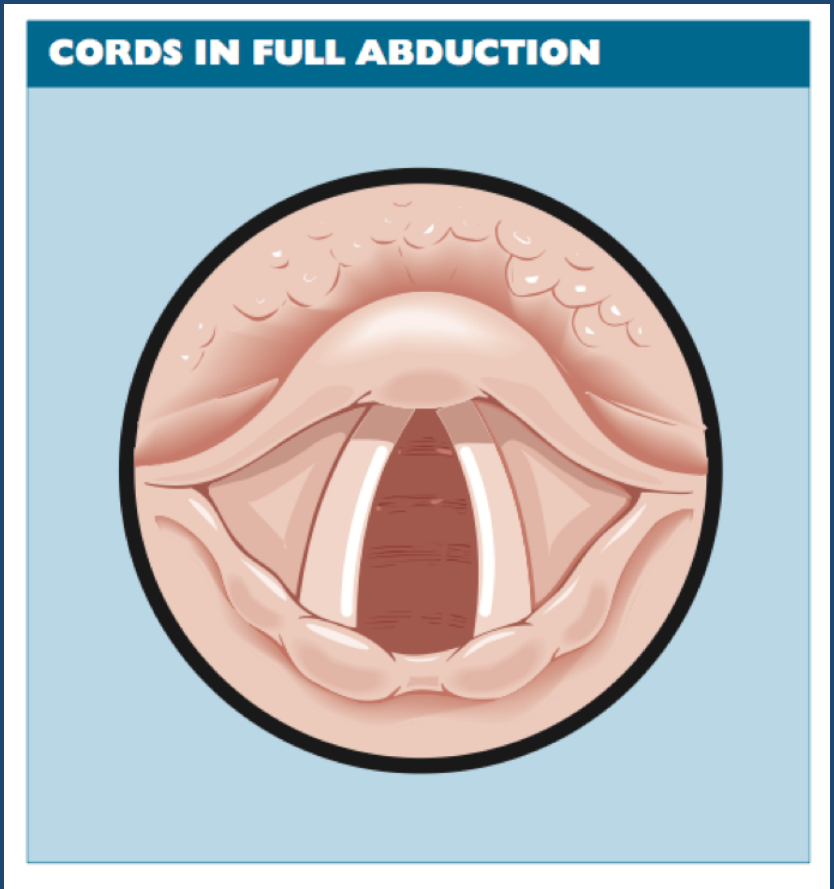


Fig. 36.1 The cords in full abduction during inspiration.

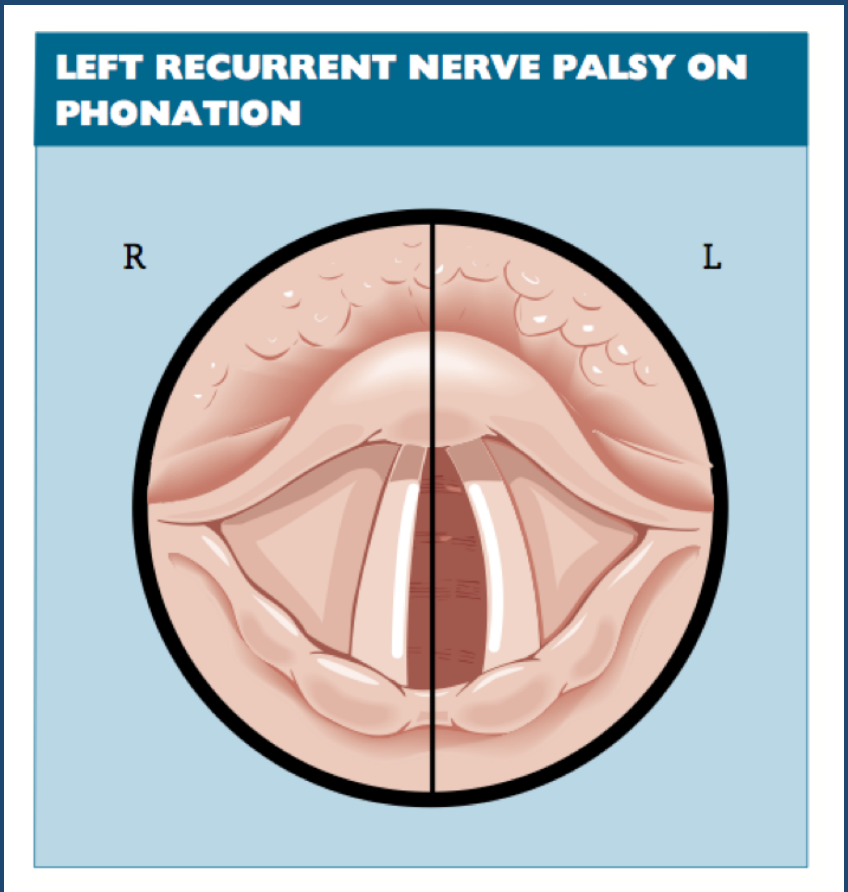


Fig. 36.2 Left recurrent nerve palsy on phonation (mirror view). Note the persisting glottic aperture owing to the inability of the left cord to move to the midline.

Fig. 4.**101** **Plastic tracheosteomy tubes.** These are also in common use.

Fig. 4.**102** **Silver tracheostomy tubes in common use** (Negus).

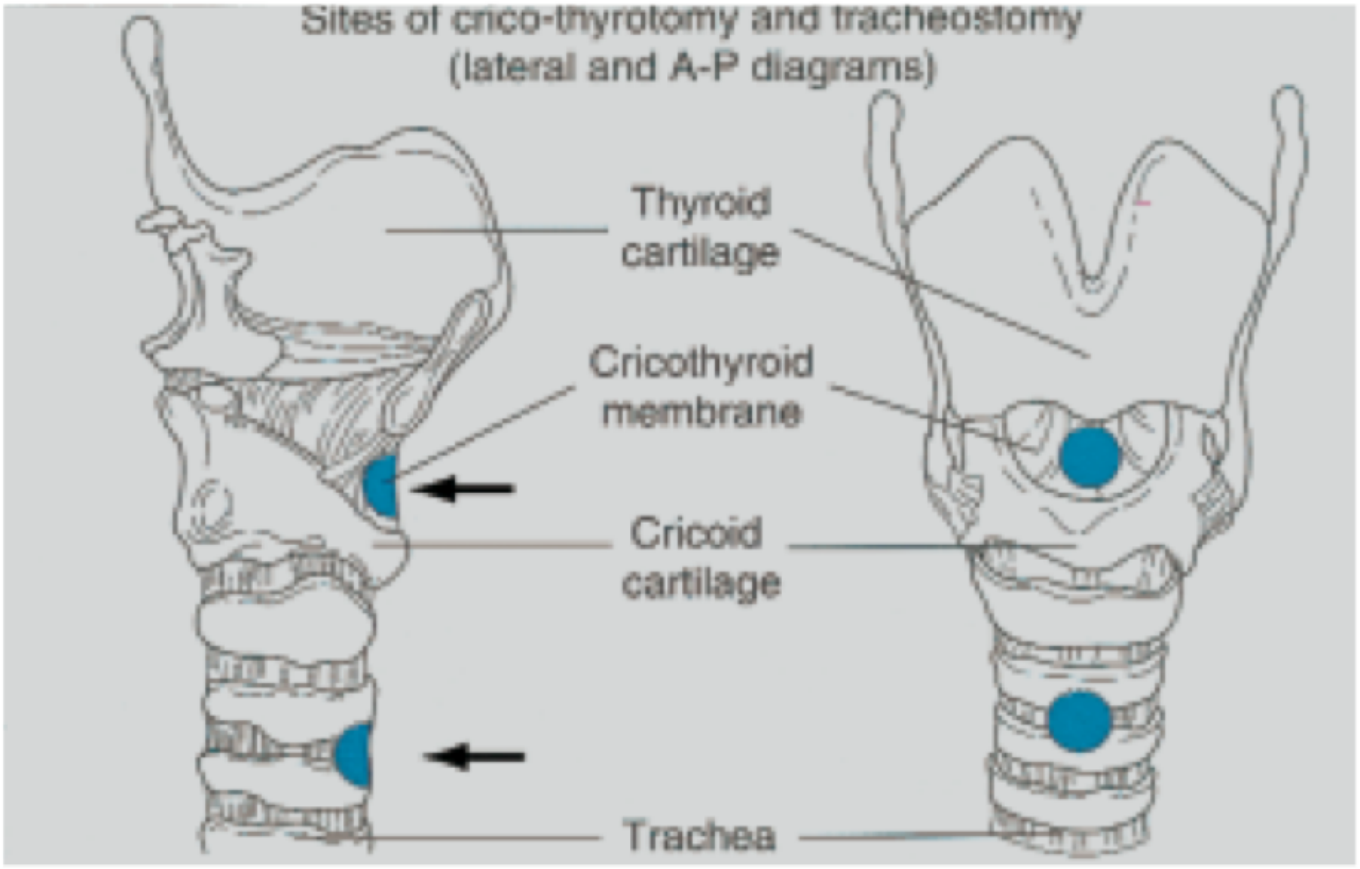


Fig. 4.**104** **Tracheostomy.** Openings are usually made between the 2nd and 3rd tracheal rings. A "higher" tracheostomy predisposes to stenosis of the larynx in the subglottic region. The airway is most accessible and superficial at the level of the cricothyoid membrane, and in acute laryngeal obstruction an opening through the membrane will restore the airway. The cricothyrotomy opening is, however, for an emergency, and is only temporary. Indwelling tubes at this site lead to subglottic stenosis of the larynx.

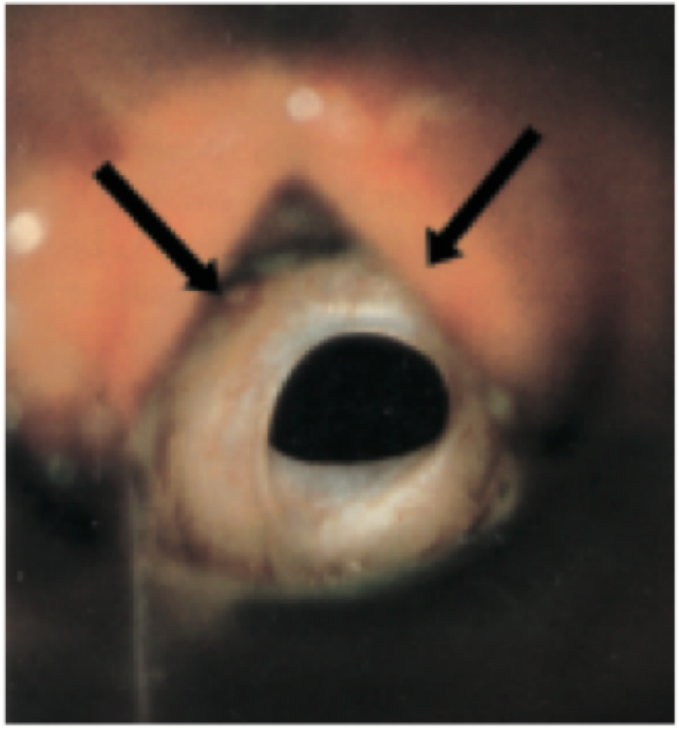


Fig. 4.**105** **Subglottic stenoses.** Slightly hyperemic cords (arrows) with an area of ring-like stenosis below the vocal cords can be seen in this patient. This stenosis followed trauma, partly related to a road traffic accident in which the trachea was injured, and also related to a high tracheostomy through the first tracheal ring. Dilation is rarely effective for this type of cicatricial stenosis, and excision of the stenotic area of the trachea with end-to-end anastomosis or grafting procedures are necessary. Subglottic stenosis is also a complication of prolonged endotracheal intubation.

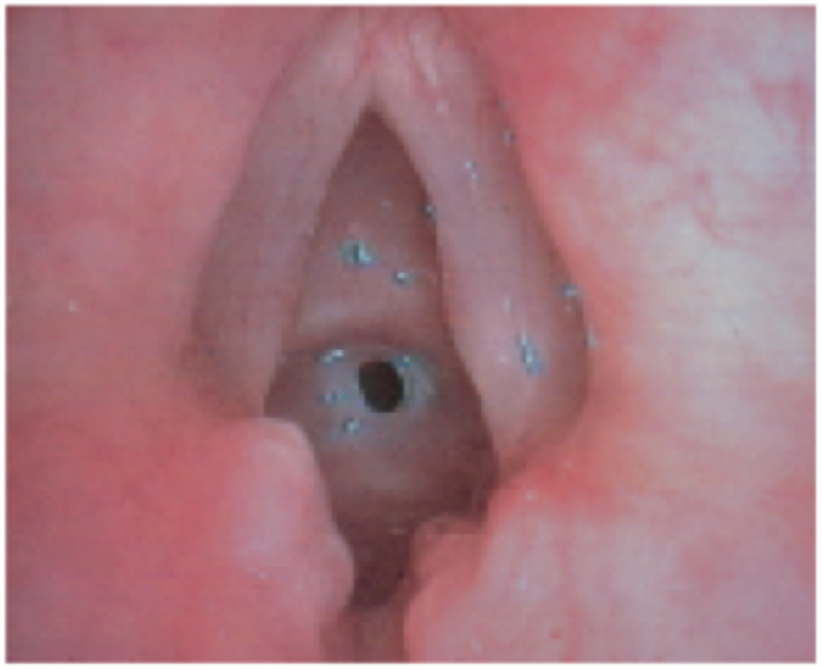
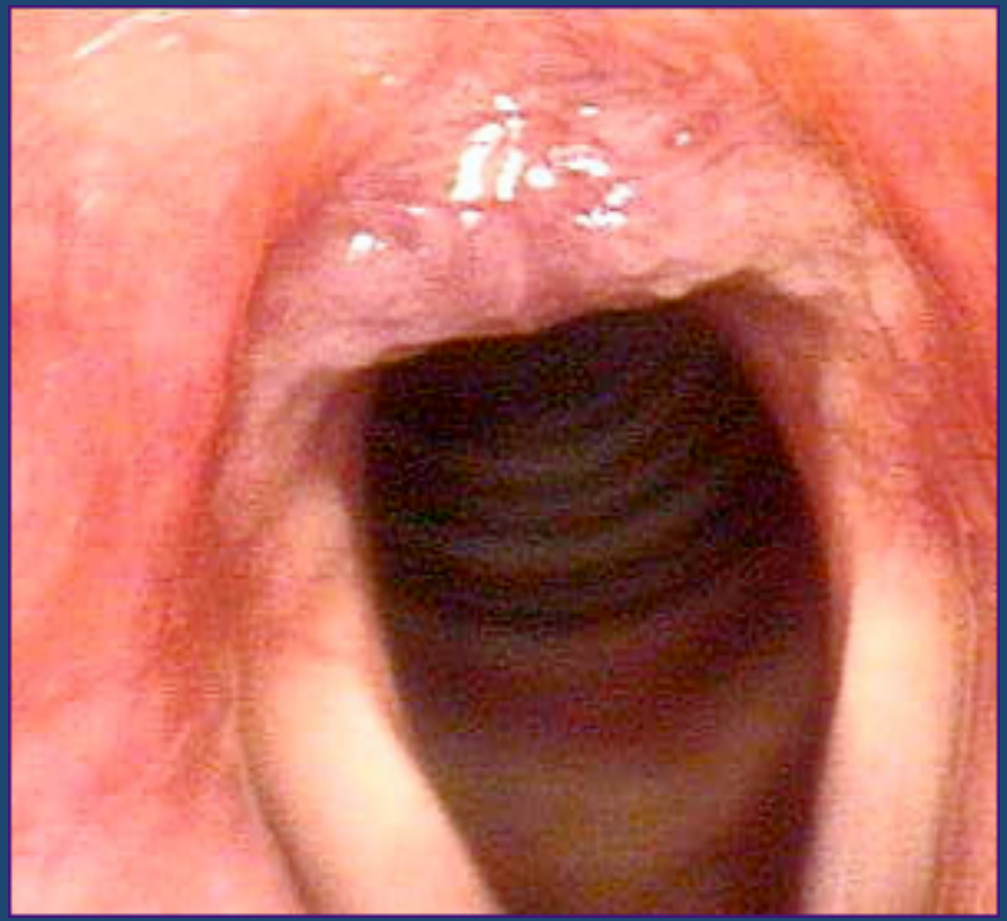


Fig. 4.**106** **Subglottic stenosis in babies and children.** This may be congenital due to a grossly thickened cricoid cartilage, or acquired secondary to neonatal intubation with consequent cicatricial fibrosis.

Dilatation is ineffective, and endoscopic laser treatment is appropriate for only the mildest cases.

Most of these children will require a tracheostomy, followed by a laryngotracheal reconstruction with costal cartilage grafting.

REFLUX-INDUCED LARYNGITIS



REFLUX-INDUCED LARYNGITIS

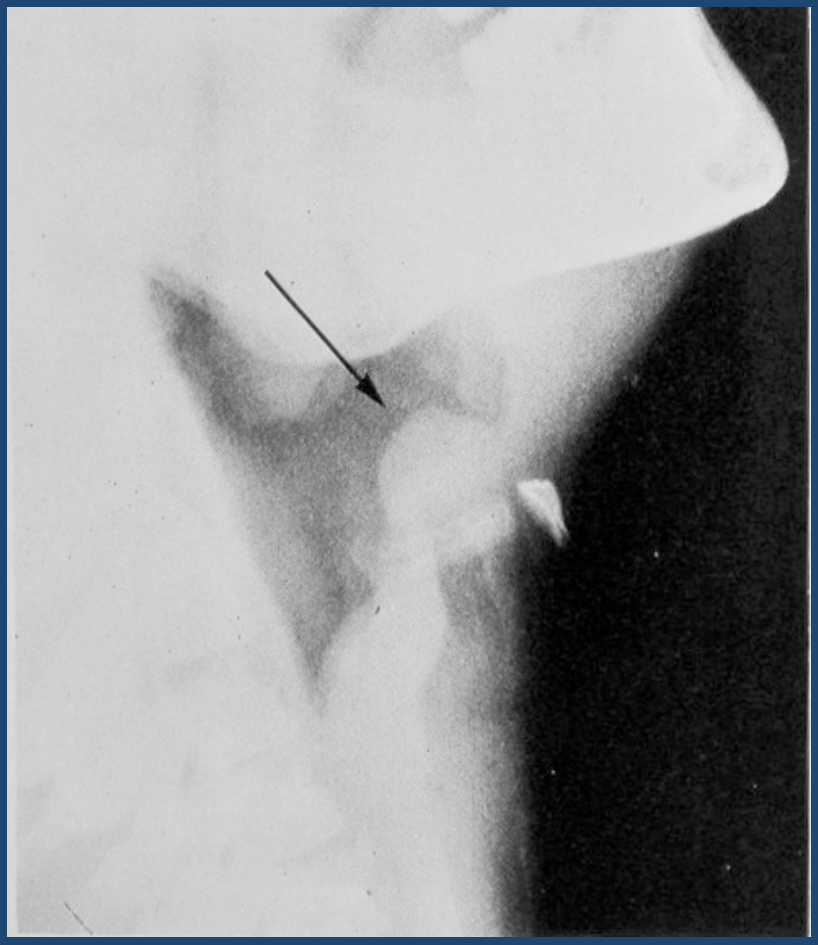
CROUP (Acute Laryngotracheobronchitis, LTB)

CROUP (Acute Laryngotracheobronchitis, LTB)

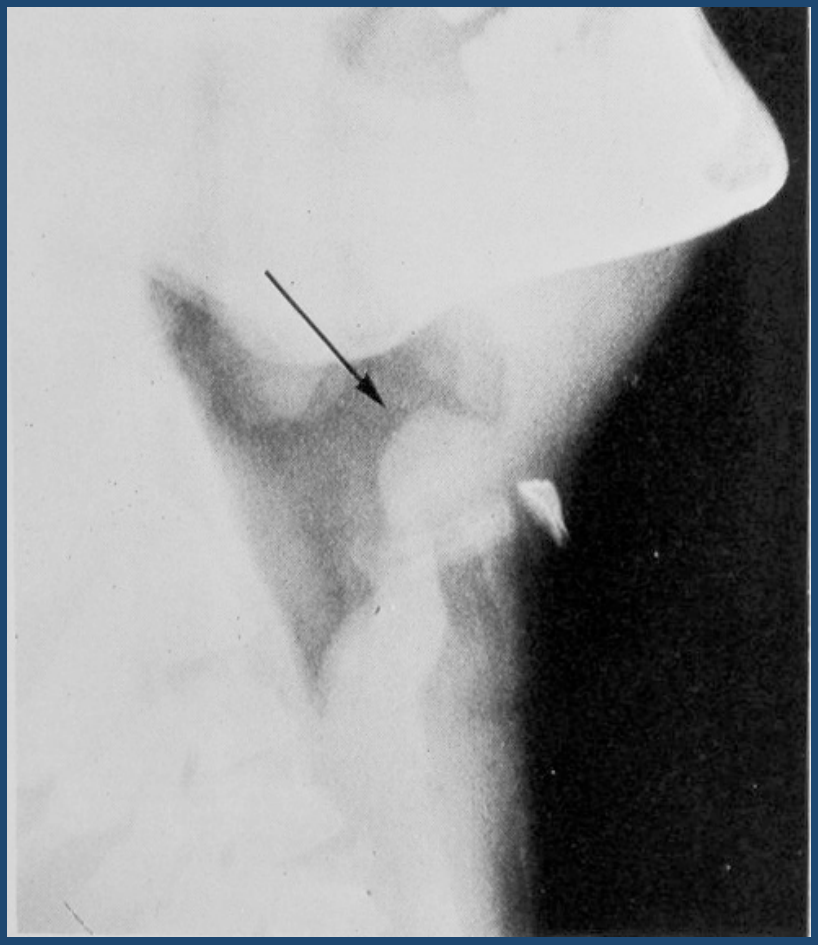
EPIGLOTTITIS

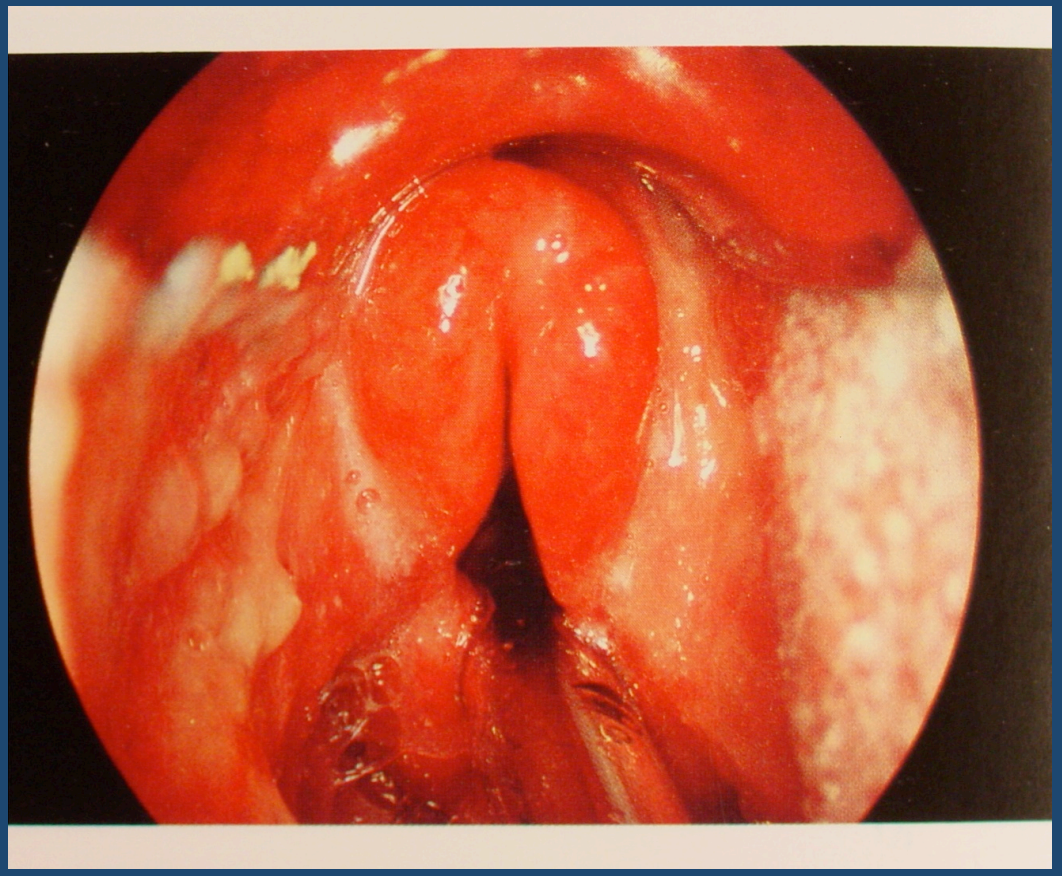
Lateral Neck Radiograph:

Cherry Shaped epiglottic swelling “ thumb sign “



EPIGLOTTITIS
Lateral Neck Radiograph:
Cherry Shaped epiglottic swelling " thumb sign "





EPIGLOTTITIS

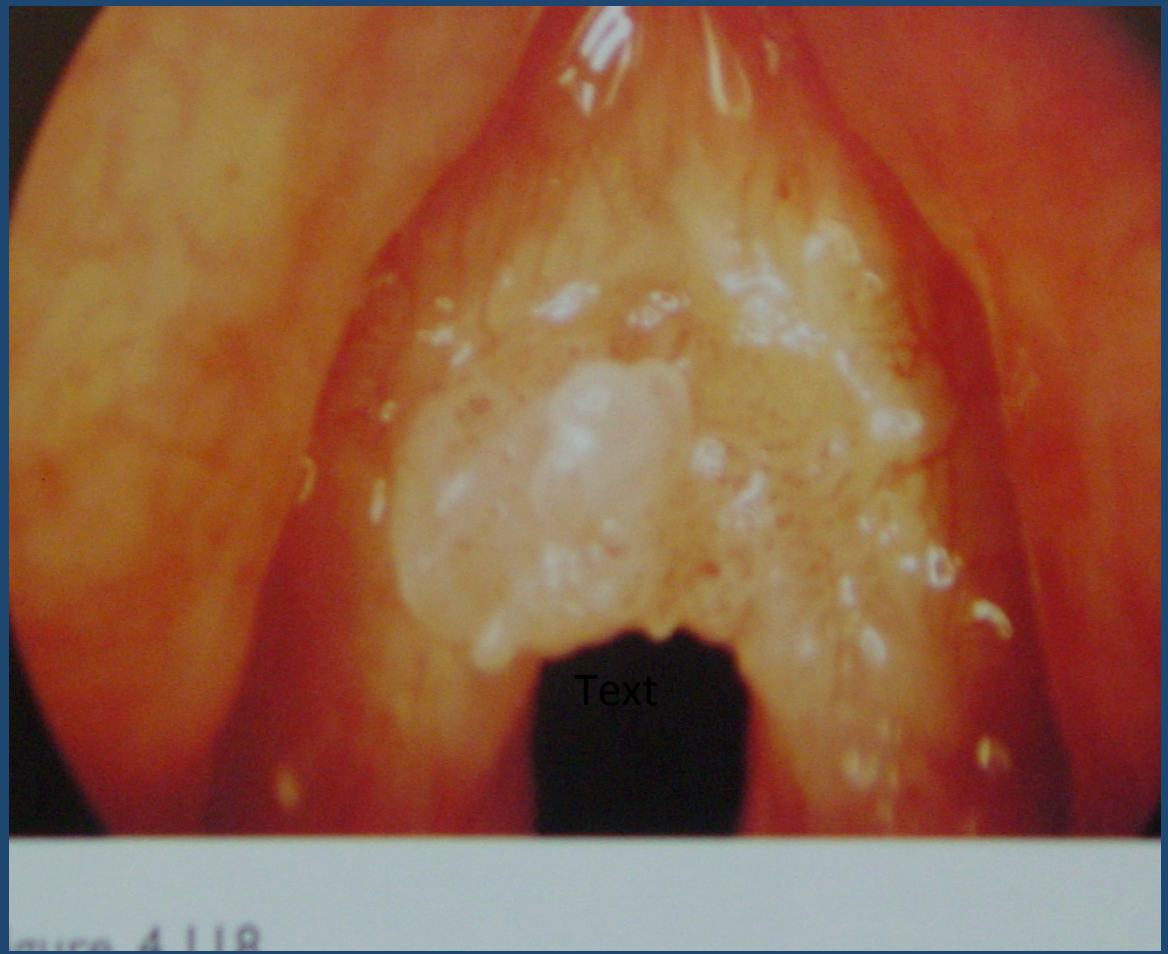
Lateral Neck Radiograph:

Cherry Shaped epiglottic swelling " thumb sign "

Text

COMMON BENIGN LARYNGEAL NEOPLASMS
Recurrent Respiratory Papillomatosis

Wart Like - Irregular Exophytic



COMMON BENIGN LARYNGEAL NEOPLASMS

Recurrent Respiratory Papillomatosis

Wart Like - Irregular Exophytic