招請講演 I

Tracheal surgery : past accomplishments and future challenges

Hermes C. Grillo, M. D.
(Harvard Medical School)

Since I first spoke before a congress of Japanese thoracic surgeons in 1975 information and experience about tracheal surgery has increased vastly. Since it is impossible to cover the entire field in a single lecture, I shall speak on selected topics.

Congenital Stenosis. The length of congenitally stenosed trachea is often too great to be resected and repaired by primary anastomosis. Following the lead of Kimura and Tsugawa patch tracheoplasty was applied to this difficult problem with some success. Goldstraw's procedure of slide tracheoplasty has since been applied in a small number of patients with complete success. This method appears to obviate many potential complications of patch procedures.

Postintubation Stenosis. Analysis of long term results in over 500 patients who underwent surgical resection and repair of postintubation stenosis confirms the generally good results of this surgery. Best results are obtained when the first operation for reconstruction is performed by trained and experienced tracheal surgeons. Postoperative granulation tissue is no longer a problem. Single stage procedures for resection and reconstruction of stenosis involving the subglottic larynx and the

upper trachea have given excellent results. Concomitant tracheostomy or T tube is required infrequently.

Idiopathic Laryngotracheal Stenosis. This lesion, sparsely described until recently, occurs principally in women, is a short circumferential stenosis characterized by dense collagen deposition and remains unrelated to any known etiologic agent or other condition. Resection and reconstruction, has proven surprisingly successful with infrequent recurrence.

Tracheal T-tube prostheses. The Montgomery silicone T-tube has proven its value (1) for temporary management of patients in whom reconstruction must be delayed for various reasons, (2) in the management of postoperative complications of tracheal reconstruction and (3), definitively, in patients who cannot undergo reconstruction who suffer either from too extensive benign stenosis or irresectable neoplasms. The T tube also finds occasional use in rare conditions such as tracheobronchomegaly and tracheopathia osteoplastica.

Tracheal Burns. Tracheas severely injured by inhalation burns are best managed conservatively, principally with T tube splinting, while reaction to the burn

injury very gradually regresses.

Extrinsic vascular compression of the trachea. In addition to well-defined instances of compression of the trachea by congenital vascular rings, aneurysms of an anomalous innominate artery, aortic aneurysms, atrial enlargement, other less common causes are encountered. Attempts at management have been variably successful. Postpneumonectomy syndrome consists of compression of the left main bronchus due to displacement and rotation of the mediastinum in some patients following right pneumonectomy or of the right main bronchus in patients with a right aortic arch who have undergone left pneumonectomy. Good response is obtained by repositioning the mediastinum and holding it in that position. If severe malacic change of the airway has occurred, anatomic correction alone is insufficient.

A small number of patients have been encountered with severe compression of the airway due to right aortic arch which has a sharply bent, "hairpin" configuration. Also present were an anomalous left subclavian artery, a diverticulum of Kummerall and a ligamentum arteriosum.

Simple division of the anomalous artery, are insufficient to correct the compression. Aortic division and bypass along with aortic suspension has been necessary.

Primary tracheal tumors. A review is being conducted comparing the clinical behavior of adenoidcystic carcinoma of the trachea and squamous cell carcinoma of the trachea—the two most common types of neoplasms occurring in the trachea. The clinical course of adenoidcystic carcinoma is much slower and shows a greater proclivity for local extension and recurrence. Earlier studies indicated that microscopic tumor at resection margins and in adjacent lymph nodes may very likely be definitively managed by irradiation in conjunction with surgery. Squamous cell cancer appears to behave like squamous cell cancer of the lung in that most recurrences occur within the first three years and tumor at resection margins or in lymph nodes declares a poor prognosis. Recurrences of adenoidcystic carcinoma continue to present well after five years following apparently curative resection. Further followup data are being developed and should be available soon.