SOCIETIES' PROCEEDINGS

DISCUSSION ON PAPER BY PROFESSOR BOCCA
SECTION OF LARYNGOLOGY, R.S.M.

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PROFESSOR BOCCA is to be congratulated on his elegant and fluent presentation. The ingenuity of the procedure he describes is beguiling, but I cannot agree with the underlying principles.

Supraglottic carcinoma undoubtedly has a rather worse prognosis than glottic carcinoma, largely because it gives rise to hoarseness later in its history. We are therefore usually dealing with a somewhat advanced growth. This in itself is hardly a plea for a conservative local excision. Why therefore is such a method suggested and practised by an experienced and able surgeon?

Now the operation of total laryngectomy has a gloomy historical background, and it still provokes, all over the world, a repelling and negative emotion in most patients and most surgeons. I believe this is the main reason why the partial operation has persisted for so long, as a persuasive alternative procedure. I say "so long" as the operation is far older than Professor Bocca suggests and is derived from what was known as lateral pharyngotomy. I first saw this operation performed over 30 years ago, when dressing for Wilfred Trotter, and he used it chiefly for carcinoma of the epiglottis and aryepiglottic folds and he also frequently included a partial neck dissection. I might add in passing that he called it a "partial" dissection. At the same period Hautant in Paris was an advocate of the operation, using it for more extensive growths of the type now described as a supraglottic and Hautant was followed by his son-in-law, Leroux-Robert, who has practised the operation for many years.

The purpose of partial laryngectomy is to preserve the functions of speech and normal breathing while at the same time safely excising the cancer. I find it hard to believe that it succeeds in these almost contradictory aims and I ask you to look at this slide (Fig. 1). Why should the larynx be amputated at this point just superior to the vocal cords? Certainly in an attempt to preserve the voice, but does this necessarily at the same time mark a safe lower limit to the growth? We have all seen glottic growths spreading superiorly into the ventricle and into the ventricular band and I simply cannot understand Professor Bocca's contention that it is impossible or rare for spread to occur in the reverse direction. In fact, we have all seen cases where it does. The embryological development of different parts of the larynx may be different, but the ultimate sheet of mucosa is continuous and, although the general pattern of lymphatic distribution within the larynx does vary, the boundaries are not as clearly defined as Professor Bocca maintains. Moreover, lymphatic channels are not the sole means of local spread. Mr. Shaw is slightly in error in his reference to the compartments described by Pressman. These compartments are submucous and not in the mucosa or epithelium and hardly enter into this after-

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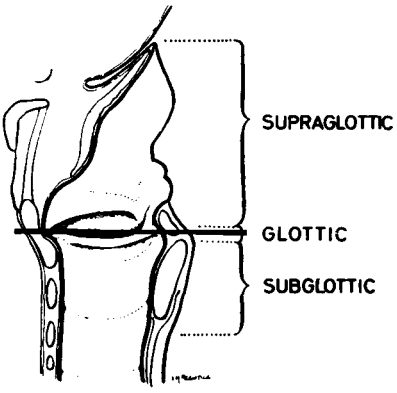


FIG. 1.
Three zones of the larynx.

noon's topic. Thus I do not believe the excision of a supraglottic growth at the level of the vocal cords complies with what we have been taught to regard as effective cancer surgery. Professor Bocca spoke in terms of 1·0 mm. of clearance —I would have preferred him to use inches.

It also seems illogical to me that such an excision, skirting so closely the growth itself, should be combined with an excision of more remote neck tissues in which cancer has not yet demonstrably appeared. And furthermore, if cancer really is present here, is the limited excision described a good cancer operation?

The late Professor Pietrantoni, Professor Bocca's former chief, once had something relevant to say on this score. Whereas our social structure has largely removed the dread of hospitalization, most Italians still have a horror of it, partly emotional and partly induced by poverty. They simply could not, and still largely cannot, afford a stay in hospital, and are very loath to return even for follow-up examinations. Many of Pietrantoni's patients came from a distance, often from southern Italy, and he knew he would never see them again. It was against this background that he began to perform neck dissections together with local excisions, as a once and for all procedure, on the assumption that the patient would disappear for good, and that further observation and treatment would very likely be out of the question. A classical Crile neck dissection, removing the cellular tissue as completely as possible from the base of the skull to the clavicle and from deep to the trapezius muscle to the midline, is a disabling operation and this may possibly be the reason why the technique of preserving the accessory nerve and the contents of the submaxillary triangle was developed. The procedure may or may not be good social medicine, but is it cancer surgery? In my experience, the earliest cervical metastases from supraglottic carcinoma are usually to the nodes deep to the posterior belly of the digastric muscle, and these are left behind in the dissections described by Pietrantoni and now by Professor Bocca who further believes that the sternomastoid muscle and the internal jugular vein can also be preserved with safety. The various appellations of "prophylactic", and "elective" and now "functional" which have been hung on this conservative

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technique do not in themselves move me to adopt it. Before discarding the accepted view of the anatomy of the cervical lymphatic system, I would like stronger evidence that it is erroneous. I thus do not operate on the neck unless I have some good reason to believe that cancer is present and I then do the classical radical operation in an attempt to clear the lymphatic field.

These are only brief comments on some of the principles of the procedure. But there are other aspects of the matter. English radiotherapists can justly be considered pioneers in radiotherapy and English surgeons refer many patients for this treatment. Our radiotherapists have thus been able to apply technological advances to an adequate supply of clinical material and thereby improve their techniques and results. Modern supervoltage irradiation is a reasonable alternative method of treatment of a limited supraglottic growth and in this country there is ready access to centres where such treatment is available. Consequently many, if not most, of our patients will be treated by irradiation in the first instance. A subsequent operation of the type described this morning would then present considerable hazards of wound morbidity and radionecrosis of cartilage as Mr. Shaw has mentioned.

Even without irradiation, the operation described has its post-operative troubles. The cross-roads of the larynx and pharynx is a highly developed neuromuscular area and its effective reconstruction, especially after the excision of much of the musculature and its skeletal support, is not uniformly easy and functionally effective. Leroux-Robert (1957) used to perform a gastrostomy as a routine, because pharyngeal healing is often delayed. Some patients are never able to swallow without overspill into the remnants of the larynx, and pharyngeal stricture requiring regular dilatation or further operation is by no means an unusual sequel of final healing. Although a few patients may later develop a good voice, I believe the majority do no better than, even if as well as, patients after total laryngectomy. Stricture of the larynx may occur necessitating a permanent tracheostome.

As a further techincal point, Professor Bocca rightly stresses the importance of excising the pre-epiglottic space, but he dissects out the body of the hyoid bone, the anterior boundary of this space, in order to facilitate the ultimate laryngeal closure. This compromise cannot be sound.

Finally, as to results by the methods usually employed in this country. The slide (Fig. 2) shows my personal series of cases in the 19 years up to the end of 1964. Many of these must have been included in Mr. Shaw's statistics, as most were patients at the Royal National. The percentage of supraglottic cases is a good deal lower than that encountered by Professor Bocca. The next slide (Fig. 3) gives a breakdown of results: 56 per cent. of 3-year cures and 25 per cent. of 5-year cures. The results in the second half of this period are almost twice as good as those in the first half—probably due to improved irradiation and surgical techniques. The methods of treatment employed were irradiation alone; surgery alone, that is to say a total laryngectomy, including the hyoid bone and all the muscles attached to the larynx and, when nodes are palpable, a total operation on the neck; or irradiation followed by surgical excision if a recurrence occurs. The horror at one time experienced at the thought of total laryngectomy is gradually being dissipated in this country by improved and more easily available methods of speech rehabilitation. I believe that there is a

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TABLE I.

SITE OF LESION.

Site	Number	Percentage
Supraglottic	57	30
Glottic	110	58
Subglottic	14	7·5
Epiglottic	8	4·5
Totals	189	100

TABLE II.

SERIES OF CASES.

	Irradiation	Surgery	Irradiation followed by surgery
Number of cases ..	75	74	35
Died of growth in less than 5 years	19	10	10
Died of intercurrent disease in less than 5 years	8 (2 S.G.)	18 (4 S.G.)	4 (2 S.G.)
Alive with no sign of recurrence—less than 5 years	27 (5 S.G.)	14 (5 S.G.)	9 (2 S.G.)
Survived more than 5 years, but died of growth	1	—	1
Survived more than 5 years and died of intercurrent disease	7 (2 S.G.)	5 (2 S.G.)	—
Still surviving for more than 5 years	13 { 10 glottic, 3 supraglottic	27 { 22 glottic, 5 supraglottic	11 { 9 glottic, 2 supraglottic

percentage better chance of a good result by operation than by irradiation. However, in this country, where most patients readily attend for follow-up examinations, it seems unjust to withhold irradiation, especially in middle-aged and active patients.

Cancer is unpredictable. We all know of cases which should have done well and have not, and sometimes of apparently grim cases which turn out successfully. Professor Bocca's results are superb but he appears to have seen a number of limited supraglottic lesions, which has not been my experience. A review of his results say in 5 years would be very interesting.

To summarize, I do not accept that this ingenious procedure fulfils the true principles of cancer surgery. I feel that the local excision is too limited and that the routine accompanying neck operation is unnecessary and inadequate.

REFERENCE

LEROUX-ROBERT, J. (1957) *Ann. d'Oto-Laryng.*, **74**, 40.

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