but the results appear to warrant further trial of this drug and those allied to it in action.

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CASE OF SARCOMA OF THE LARYNX

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Tumours other than squamous-cell epithelioma of the larynx are rare. According to Havens and Parkhill (1941) 26 cases were encountered at the Mayo Clinic during a period of 30 years. These included four cases of sarcoma previously reported by New (1935). During that period 1,100 malignant and 722 benign tumours of the larynx were examined at the Mayo Clinic. Of the 26 malignant non-squamous-cell tumours 11 were cases of sarcoma, 8 of haemangio-endothelioma, 5 of adenocarcinoma, 1 of melano-epithelioma, and 1 of myeloma. Of the 11 cases of sarcoma 8 were diagnosed as fibrosarcoma, including fibromyxosarcoma, 2 as chondrosarcoma, and 1 as rhabdomyosarcoma. The ratio of all other types of malignant disease of the larynx to squamous-cell epithelioma of the same organ was 1:44, and the ratio of sarcoma to carcinoma was approximately 1:100.

This is at variance with Ewing (1928), who stated that sarcomas form about 11% of malignant laryngeal growths. Ewing added, however, that "many cases recorded as sarcomas are of epithelial origin." In Jackson and Coates's (1929) series of 643 malignant tumours of the larynx not one case of true sarcoma was found, and Thomson and Colledge (1930), in a wide experience, have seen only one case of sarcoma. Clerf (1946), from the Jefferson Hospital, Philadelphia, where, since 1930, 740 cases of carcinoma of larynx were seen, reported 8 cases of sarcoma (4 fibrosarcoma), and notes that 7 further cases have been added to the literature since Havens and Parkhill's report. A ratio of 1:100 of sarcoma to carcinoma is probably not far off the mark.

Sarcoma of the larynx is a localized tumour with little tendency to infiltrate underlying and surrounding tissues. It is very often pedunculated, less often sessile or lobulated. Its surface is not ulcerated, but in some cases erosion of the surface can be observed. The sites of predilection of sarcoma of the larynx are the true vocal cords. Metastases are very uncommon, recurrences less so. The size of the tumour varies, but generally it is bigger than that of carcinoma. The symptom most frequently present is huskiness, and the mechanical obstruction causes dyspnoea only rarely.

In two out of the four cases described by Figi (1933) an emergency tracheotomy had to be performed. Dysphagia is rare except in cases involving the epiglottis or when the tumour occludes the hypopharynx. A history of influenza

or acute or chronic chest troubles immediately before the finding of a tumour of the larynx is often encountered.

Histologically, according to the presence of a variety of mesodermic structures, fibromyxosarcoma, chondrosarcoma, and rhabdomyosarcoma can be distinguished. In fibrosarcoma, strands of spindle or round cells arranged in an irregular pattern with collagenous fibrils in between the cells can be seen. The blood vessels are often scanty and small. The cell nuclei are small and spindle-shaped, but in some tumours round nuclei can be seen.

The treatment is usually on surgical lines. According to the degree of differentiation of the tumour, and its cellular population, the question of post-operative or "radical" radiotherapy has to be considered. Simple punching of the tumour with direct or indirect laryngoscopy followed by electrocoagulation of the point of attachment of the tumour, although feasible in some cases, is not satisfactory. Laryngofissure is adequate even in cases in which, on first inspection, the size of the tumour rules this procedure out.

The prognosis in sarcoma of the larynx is relatively good. Of the 11 cases of sarcoma at the Mayo Clinic (Havens and Parkhill, 1941) 9 were treated principally by surgical operation and 2 with radium—8 patients were alive and well (6 for more than five years), 2 died without recurrence, and 1 died with recurrence. In Clerf's series 2 were living for over five years, 3 died of intercurrent disease, 1 died of local recurrence and metastases in the lung, and 2 were observed for only a few months post-operatively.

Case Report

The patient was a man aged 66. On May 12, 1943, he reported huskiness of a few weeks' duration and some difficulty on swallowing since December, 1942. A smooth, mobile, semi-pedunculated wet-looking tumour, 0.8 cm. across, was found in the middle of the right true vocal cord. The movements of both vocal cords were normal and full. On June 1 the tumour was removed by diathermy (E.B.B.), and the piece sent for section.

The pathological report (E.S.D.) was "sarcoma, probably fibromyxosarcoma." This section was also seen by Dr. A. H. T. Robb-Smith, Radcliffe Infirmary, Oxford, who concurred in the diagnosis of fibromyxosarcoma. The patient was followed up, and was well until November, 1943, when, after a bout of influenza, he started complaining of huskiness again, and a small nodule reappeared in the middle of the right vocal cord, which was now limited in its movements. The tumour was hard and nodular, roughly circular, and measured 0.7 cm. each way. On Jan. 11, 1944, a laryngofissure was performed (E.B.B.). Post-operative deep x-ray treatment was given (B.J.). The section of the removed tumour was seen by Mr. D. Harmer and the late Dr. J. C. Mottram, of Mount Vernon Hospital, Northwood, who also concurred with the original report of fibrosarcoma. The patient was well on Jan. 11, 1948, and, except for slight thickening of the right vocal cord and anterior commissure, there was nothing abnormal in his larynx.

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Sponsored by the Mexican Government and the British Council, Dr. Luis Vargas is spending six weeks in Britain to study Mexican and neotropical mosquito and blackfly specimens in the Natural History Museum. Dr. Vargas is chief parasitologist in the medical science division of Mexico University Graduate School, and laboratory-of-entomology chief in the Institute of Public Health and Tropical Diseases.