glands on the leaves of the sundew contain a fluid which is not charged with full insectivorous powers till the victims have been caught. The secretion is then not only increased, but changed from neutral to acid.

Nearly all of the following phenomena have been observed after every injection: A burning sensation comes on soon and lasts for about half an hour. Curious but scarcely painful feelings, as if some small animal were nibbling at the flesh, begin some hours after and wear away in a day or two. Nausea is sometimes complained of in association with the burning or nibbling sensations. The tumour softens round the site of puncture in two or three days; there is then a slight rise of temperature. In about ten days, on an average, the tumour begins to discharge copiously through a small hole a thick greyish or greenish stuff, having much the appearance of the emulsion itself. This has happened eventually in every case, but not always after the first or even the second injection. The discharge ceases after one or more weeks. The temperature subsides on its appearance, and remains normal, or nearly so, during its continuance. When the discharge stops, the tumour is found to have entirely disappeared or to have become notably smaller. If there be no discharge after a first or second injection, the tumour is still more or less diminished in size by it. Cancer pains cease after the first injection. Nothing analogous to "serum sickness" or a "negative phase" has been noticed in connexion with the injection of papain into cancer.

In one patient "stormy symptoms" occurred, though the doses were only half as large as those given at shorter intervals in some other cases. This old lady had hysterical excitement, vomiting lasting for a day, and rise of temperature to 102°, or near it, after each of the first three injections. Immediately after the fourth her breathing became oppressed, and the skin was suffused with a livid flush. These symptoms wore off in half an hour. As it is said that a toxic dose of papain paralyses the heart she may have been intolerant of the drug, for she was suffering from valvular disease in a far advanced stage. Under these circumstances, it was reluctantly decided to abandon the effort to eradicate the cancer. She had already undergone amputation of the breast and the cutting out of a large recurrent scirrhus growth. From the condition of her heart it had been decided that it would be inadvisable and hopeless to resort for a third time to the knife. When she last applied for medical aid, it was on account of two large, rapidly-growing, and hard tumours under the skin of the chest. One of these had already disappeared entirely from papain injection, when this mode of attack on the disease had to be discontinued. She died two months after in a paroxysm of palpitation and dyspnoea. The lancinating pains never returned, not even in a new scirrhus that formed on the back of the chest.

An important divergence from the general programme of treatment was necessitated by the circumstances of the following case:

M. S., a black woman, 65 years old, and the mother of many children, who was admitted into the Cunningham Hospital with scirrhus of the right mamma. It was very large, hard, and the site of frequent and severe lancinating pains. The skin from the breast to the clavicle was thickened and brawny. The pectoral fold, up to the shoulder, was indurated, and the glands in the armpit were agglomerated into a mass of rocky hardness. She said that she wanted the breast taken off, because the pains in it gave her no rest. Though the disease was primary and in an operable region, nothing could be hoped for from the ordinary operation. Dr. Edmund Branch amputated the breast by a wide, elliptical, transverse incision, the upper line of which had to run through cancer-infiltrated tissue. Closure of the wound had not been contemplated, and was not attempted. It was dressed with papain ointment, 1 drachm to 1 oz. of lanolin, and bathed twice a day with a 2 per cent. solution of lysol. The mass in the axilla was injected eighteen days after with 2 gr. of papain in the usual emulsion. This was followed in about ten days by an abundant flow of thick grey stuff for several days. When this ceased, the axillary mass had quite disappeared. After an interval of thirty days the same sized dose of papain was injected into the indurated pectoral fold. In a week or so the grey discharge began to pour from the pectoral fold, and continued to do so till the tissues became normal to sight and touch. Meanwhile, the big mammary wound had healed rapidly, and was now only the size of a florin. Its margins were apparently normal, and so was the once brawny integument in its neighbourhood. She had no more pains, and was anxious to go home. She came

two or three times among the out-patients, but as soon as the wound had cicatrized entirely she could no longer be found, though she had been warned that the disease would probably come back soon, and that the appearance of the smallest lump would necessitate her immediate return to the hospital. Search was made for her without success, but she presented herself for examination two or three days ago. A ring of nodules had formed round the cicatrix. People of her class and race are fatalists. She positively refuses to let anything more be done.

It seems possible that papain injections may be admissible in the treatment of some cases of primary cancer and other tumours. I have lately come across a statement that papain has been applied, I suppose externally, to epithelioma; but there was no mention of the result. It is very likely that it was satisfactory. I rubbed the fresh juice of the root of the papaw tree on two small growths, neither of which was malignant. They were both entirely eradicated by a few applications. The little operations were perfectly painless, surpassing in this respect similar ones done with sodium ethylate. Perhaps leprosy tubercles might be removed in this way with less pain and disfigurement than by the acrid juice of the cashew.

Dr. Shaw Mackenzie points out, in an instructive little note in the BRITISH MEDICAL JOURNAL of July 7th, that temporary improvement in the local manifestations of cancer do not justify the conclusion that the medicinal agent employed can cure cancer. This is corroborated by the preceding paragraphs. There is no hint in them that any case was cured. There has not, indeed, been time as yet to justify such a claim, nor is it likely ever to be justifiable with respect to such of these patients as are still under observation; but it must be remembered that these 5 cases were selected for the very reason that their condition was hopeless. Their record demonstrates, however, that papain can remove recurrent manifestations of scirrhus, in an operable region, as effectually as if they had been cut out with a scalpel. With the help, therefore, of this drug, the external development of recurring cancer can be controlled if the sufferers apply for help at the first appearance of each fresh nodule.

But the local antagonism between the medicinal agent and the neoplasm suggests a correlated antidotal relation of the former to systemic cancer. This, however, is far too important a subject to be broached at the foot of so long a paper.

HYDATID CYST OF THE NECK, WITH CELLULITIS CAUSED BY RUPTURE AND ESCAPE OF HYDATID FLUID.

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RECORDS of hydatid cysts about the cervical region are not numerous; in addition this case presents several points of a rather unusual nature.

History and Condition on Admission.

The patient was a gardener, a strong and active man, aged 32. When he was 18 a small lump made its appearance on the left side of his neck; it had continued to grow ever since, until it had reached the size of a large cricket ball, but it had never given him any pain or inconvenience.

The day before I saw him he had been put to some extra exertion by cycling, and had been doing some rather heavy work in the garden. During the evening he felt feverish, and was awakened in the night by an aching pain in the neck. When he got up in the morning he found that his neck had swollen to a tremendous size. He was seen by Dr. Hayward, of Abingdon, who sent him to the Radcliffe Infirmary, where he came under my care. He then had a large swelling on the left side of his neck, which he complained ached a little and felt hot to him; this swelling extended from just below the horizontal ramus of the jaw to below the left clavicle, and from the middle line in front to the middle line behind, the skin over it being red, inflamed, and oedematous, the oedema extending to the right across the middle line, below on to the chest wall as far as the nipple, and behind to the middle line and down over the scapular region. The tumour itself was the size of a fetal head, tense and fluctuating but not painful; the patient said it was twice the size it had been on the previous day. There was so much oedema that it was difficult to make out the relationship of parts; neither the lower part of the left sterno-mastoid nor the sternal end of the left clavicle could be defined. There was no constitutional disturbance; temperature, pulse-rate and respirations being normal, and there was

no difficulty in swallowing. The following day the tumour had decreased considerably in size, and it was possible to see that it was rounded and as big as two fists, occupying most of the posterior and supraclavicular triangles; it was then soft, elastic, fluctuating, and movable, but not with deglutition; the oedema had diminished considerably, and it was possible to define the sternal head of the sterno-mastoid, and the left clavicle could be felt throughout its extent. Examination by transmitted light proved the tumour to be translucent. At the end of ten days the tumour was somewhat smaller than is shown in the photographs, and the oedema had entirely disappeared. These photographs were kindly taken by Dr. Richard Sankey twenty-four hours after the admission of the patient to the hospital, at a time when the oedema had much diminished.

Operation.

As the patient was anxious to be rid of the tumour an operation was decided upon.

An incision was made along the whole length of the upper border of the left clavicle, a second incision was made at right angles to the mid-point of this, and two triangular flaps of skin and fascia raised and turned inwards and outwards. The fibres of the clavicular portion of the sterno-mastoid were found spread out over a portion of the tumour, also the descending cutaneous branches of the third and fourth cervical

nerve. The tumour itself was protruding from behind the sterno-mastoid, and occupying the posterior and supraclavicular triangles. As it was impossible to get down between the tumour and the clavicle it was attacked on the inner side, the sterno-mastoid being turned off it, when it was found to be firmly adherent to the internal jugular vein, and to pass backwards and inwards behind the carotid sheath. The cyst was now opened, and typical hydatid fluid evacuated, together with some gelatinous material and the endocyst, which had separated from the ectocyst and floated out with the fluid. On looking into the cyst its wall could be seen covering the floor of the posterior and supraclavicular triangles, and to be passing down behind the carotid artery and internal jugular vein, which were clearly outlined on its walls in the direction of the oesophagus; after a tedious dissection the whole of the cyst wall was removed; the chief difficulty was in the direction of the internal jugular vein; many large blood vessels were found connected with the cyst wall. The margins of the incision were united, and the extensive cavity drained by gauze through a small hole made in the posterior portion of the external flap. The patient made an excellent recovery, and was back at his work in a short time.

The fluid evacuated from the cyst was examined by Dr. Gibson at the University Pathological Department, and found to contain scoleces and hooklets.

The diagnosis in this case was a difficult one, and was not made before operation. The tumour was obviously a cystic one, and the two conditions chiefly considered were

that of a branchial cyst or a cyst arising in connexion with thyroid tissue.

It was at first thought that the rapid increase of size might have been produced by hæmorrhage into the cavity of a cyst, but this was put out of court when it was found that the cyst was translucent. The cellulitis and oedema was without doubt caused by the extravasation of hydatid fluid into the subcutaneous tissues, which would account to a great extent for the apparent increase in the size of the tumour. At the same time there may have been some exudation into the cavity of the cyst.

Attacks of urticaria, herpes, and localized cellulitis have from time to time followed the rupture and subsequent escape of hydatid fluid into the tissues of the body; such results were not at all uncommon when the old treatment of tapping these cysts was in vogue. A poisonous ptomaine has been isolated from the fluid, and experimental injection of hydatid fluid into the subcutaneous tissues has produced these various conditions.

In this case it would appear that the extra exertion indulged in by the patient had caused a slight rupture of the cyst wall, so allowing some of the fluid to escape.

The triangles of the neck are rather an unusual situation for the parasite. I have found records of few such cases. Dr. Davies Thomas, in his excellent work on hydatid disease, points out that the cysts are generally found on those sides of the limbs where the principal blood vessels course, and that in the neck they generally affect the neighbourhood of the carotid artery, as in this case.

INTERNATIONAL LARYNGO-RHINOLOGICAL CONGRESS.—An International Laryngo-Rhinological Congress will be held in Vienna from April 21st to the 25th, 1908, on the occasion of the fiftieth anniversary of the application of the laryngoscope to medicine, with which the names of Czermak and Türk are intimately associated. The Congress, which will be under the honorary presidency of Hofrat Professor von Schrötter, will be purely scientific in character. Communications in German, English, and French will be received. They should be in the hands of the Secretary, Professor M. Grossmann, IX, Garnisonsgasse No. 10, Wien, not later than December 21st, 1907, and they will be placed on the programme in the order in which they are received. A short summary in each of the three official languages should be supplied at the same time. Each member of the Congress will be presented with a medal inscribed with portraits of Türk and Czermak. The President of the Organizing Committee is Professor Chiari.