ance of throat disease in teachers working under such conditions, and the comparative immunity of those not so circumstanced; (b) the history of certain cases in which the inception of the throat lesion could be traced; and (c) the statements of experienced teachers themselves. It seemed probable, also, that the other influences mentioned above co-operated to produce laryngeal or pharyngeal disease.

REFERENCES.

- ¹ Watson Williams, *Diseases of the Upper Respiratory Tract*, 1895, p. 86.
² Milligan, *BRITISH MEDICAL JOURNAL*, November 2nd, 1895.

EMPHYEMA OF THE ANTRUM IN A CHILD AGED 8 WEEKS.

By D'ARCY POWER, F.R.C.S.ENG.,

Surgeon to the Victoria Hospital for Children, Chelsea.

A WASTING boy, aged 8 weeks, was admitted under my care at the Victoria Hospital for Children on July 30th, 1897, on account of an abscess, which had pointed and was discharging at the lower part of the right lower eyelid. The right side of the face was somewhat fuller than the left, and the skin of the lower eyelid and cheek was red and hot. A considerable quantity of pus could be squeezed out by pressing upon the cheek, and on looking into the mouth a small quantity of pus could be seen exuding from the alveolar border of the upper jaw. A probe passed along the sinus in the cheek showed that the upper part of the superior maxilla was bare. I enlarged this sinus, scraped away some granulation tissue, and made an opening through the floor of the antrum, so that a drainage tube could be passed from the eyelid into the mouth. About a drachm of thick pus came away at the time of the operation, but the child died ten days after the operation.

The child's attendant said that forceps had been used at its birth, and that after delivery both sides of the face were badly bruised, the right more than the left. When the baby was a month old he seemed to have some difficulty in closing his mouth, and he refused the bottle. About the same time the redness and swelling appeared below the right eye, and eventually an abscess was opened by the medical men in attendance. The discharge of pus continued until the child was brought to the hospital. There had not been any case of infectious disease in the house.

Cases of antral empyema in young children are extremely rare. Indeed, I can only find one similar case recorded in detail. It occurred in the practice of Dr. Rees.¹ The patient was a child, aged 2 weeks, in whom the abscess pointed upwards immediately below the eye and downwards on the left side of the palate. In this case, as well as in another of which Dr. Rees gives no further account, the child was born with the face towards the pubes, and he attributes the abscess to the pressure exercised by the arch of the pubes on the face during parturition. Mr. Spencer Watson in his work on diseases of the nose,² also says that he has seen two cases of abscess of the antrum in very young children in whom he had reason to suppose that the mischief was connected with injuries received during parturition. I am indebted for the notes of the case to my house-surgeon, Mr. H. B. Muir, M.B.

The specimen will be exhibited before the Pathological Society of London in the course of the ensuing session.

REFERENCES.

- ¹ *London Medical Gazette*, 1847, vol. iv., N.S., p. 860. ² *Diseases of the Nose*, 1890, p. 164.

CANCER OF THE BREAST TREATED BY INJECTION OF ALCOHOL.

By WILLIAM YEATS, M.D.,

Consulting Surgeon, Ancoats Hospital, Manchester.

WITH the idea that such a line of treatment might be further pushed in other and similar cases with success, I consider the following so remarkable that it should be recorded.

A. B., aged 58, widow, the mother of three children, middle sized, fairly nourished, rather sallow, and looking older than she is, presented herself in my room on February 17th complaining of a growth in her left breast. In the family his-

tory there was nothing particular to note either in regard to the direct or collateral members of her family, except that one sister, whom also I attended, died of cancer originating in the anterior mediastinum, developing outwards and involving the sternum and the anterior extremities of the second, third, and fourth ribs. As to the personal history of the patient: she had very little to complain about; her health had always been considered satisfactory, her position very comfortable indeed for her, and her habits had been good.

The history of the growth in the left breast was as follows: She stated that in June, 1896, she accidentally noticed, in the course of her toilet, a hard lump; that this steadily enlarged, but it was only in January of this year when the skin gave way, an offensive discharge was set up, and the pain became considerable, that she resolved to seek advice. She knew no cause. On examination the left breast was fully twice as large as the right, and very much heavier, the nipple was much retracted, the skin was ulcerated under and to the left of the nipple for about an inch, considerably indurated around, and adherent to the underlying parts. On palpation there was found at once a large tumour, hardy and knobby. There were several smaller masses along the lower edge of the pectoralis major, and the glands in the axilla were a good deal enlarged. She complained, too, of the characteristic pains, which were aggravated by handling. There was no doubt about the diagnosis. The right breast was very well developed and healthy. On being informed of the nature of the disease—which she had surmised—and advised that complete and immediate removal of all the parts was, perhaps, the best procedure, she refused to submit to the operation.

Bearing in mind a form of treatment by injection of a mixture of absolute alcohol and distilled water used by Dr. O. Hasse, and published in the *Archiv für path. Anat.*, B. 146, Hft. 2, S. 209, November 4th, 1896, Zur Krebsheilung, which had been brought to my notice by Mr. Thomas Windsor, I at once suggested and recommended the plan, and to this she readily acceded. Accordingly on February 20th, with a mixture of 40 parts absolute alcohol and 60 parts distilled water, 23 syringefuls, each of 20 minims, were injected deeply into the tissues all round the tumour, and into the axilla in the neighbourhood of the enlarged glands. The injections, averaging from 22 to 25 syringefuls each time, were repeated on February 27th, March 3rd, 8th, 13th, 17th, 20th, 24th, 27th, 31st, April 3rd, 8th, 11th, 14th, 18th, 25th, and May 2nd. Each sitting occupied about three quarters of an hour, and as the injected fluid had a great tendency to run back again, to obviate this I found a smear of collodion over the needle pricks the best preventive. The patient experienced considerable immediate pain from the injections, lasting from half to one hour. After the second series of injections, the patient declared that the sensations in the breast were altered, the shooting pains were no more felt, and the itching on the surface of the breast which she had complained of disappeared and never recurred. After the subsidence of the immediate painful effects of all the other injections, the patient felt more comfortable in every way. When the process had been continued for five weeks, the parts around the tumour began to be oedematous, but still the injections were continued into and beyond the oedematous parts. During the sixth week the patient and her nurse stated that they considered that the growth was less, and certainly at the beginning of the eighth week (April 11th) the whole breast, including the tumour, had diminished in size.

After this date all the parts, breast and tumour, rapidly shrunk, until in May there was actually nothing left of the mamma to be felt by the hand, and practically nothing left of the tumour but the nipple and slight thickening under it. There was still oedema in the injected area. The glands in the axilla could not be detected. At this time I asked Mr. Windsor to examine the case, which he did on May 12th, and he stated "that whilst the right was a fairly large hanging breast, the other—the left breast—had practically disappeared, the nipple only remaining; that he did not find any thickening under the pectoralis nor enlarged glands in the axilla." After these seventeen injections, a complete structural change to all appearance having taken place, it was intended to continue the injections at longer intervals for

a considerable time, but unfortunately the patient became ill otherwise. She lost her appetite, she became slightly jaundiced, and on examining her in bed on May 16th it was found she was suffering from cancer of the liver with ascites. This being the case nothing further was done; the patient rapidly got worse, and died on June 10th.

After death, the breast and all the surrounding structures were removed as well as a part of the liver: and these I submitted for examination to Dr. Delépine, Professor of Pathology, Owens College, and subjoined are his report and remarks, dated July 22nd, 1897:

"The mamma is replaced by a dense fibrous-looking mass with several processes extending into the surrounding fat. It is firmly connected with the subjacent pectoral muscles. The skin is rough, superficially ulcerated at one place, and adherent to the subjacent tissue round the nipple. The nipple is depressed but not considerably retracted.

"*Microscopically.*—The cutis vera, subcutaneous tissue, and fat surrounding the mamma show distinct signs of proliferative inflammation of the connective tissue elements, and little infiltration with leucocytes.

"The tumour itself presents, in most places, the appearance of an atrophied scirrhus carcinoma—that is, the epithelial cells are small, they do not fill the alveoli containing them, and the stroma is, generally speaking, abundant, and shows signs of great proliferative activity, the periacinous connective tissue shows in a marked degree the metamorphosis described as elastic degeneration. These signs of atrophy of epithelial elements and increase of connective tissue stroma are not absolutely general, and in some parts the tumour still presents the appearances of a typical scirrhus carcinoma.

"The section of liver shows several confluent nodules of scirrhus carcinoma, very cellular, epithelial cells of the same type as those found in the mammary tumour, extensive tracts of necrosis, biliary pigmentation, and capsular hepatitis.

"In conclusion, I would suggest that the mammary tumour shows signs of marked irritation of the connective tissue elements, and atrophy of the epithelial cells, and that this may be fairly attributed in part to the action of the alcoholic injections, the similarity existing between the hepatic secondary growth and the primary mammary tumour throwing a certain amount of doubt over this conclusion.

"(Signed) SHERIDAN DELÉPINE."

The clinical history showed clearly an enormous diminution of the cancer of the breast and complete disappearance of the glands in the axilla; and it may be concluded that had not the cancer in the liver developed, there was every prospect of a complete cure of the breast.

The action of the alcoholic injections would seem to be that the injected tissues, more especially the cellular, become indurated and contracted, that the blood vessels become sealed up and the nerves compressed, and hence the strangling of the nutrition supply and the shrivelling and atrophy of the tumour.

The cases in which this plan would seem most likely to be suggested are those where operation is absolutely refused or impracticable, those which have recurred and are unfit for further operation, and perhaps certain cases after operation with the view of preventing recurrence.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, ETC.

A PIPE STEM IMPACTED IN ONE OF THE BRONCHI FOR A PERIOD OF THREE MONTHS.

Two months ago J. W., an army pensioner, sent for me, and gave the following history. About a month previous, while he was standing quietly in the street smoking a briar pipe with a vulcanite stem he was seized with a fainting fit and fell. He was raised from the ground by the bystanders, and

recovering consciousness he looked about for his pipe, but found that the shank was broken about an inch from the mouthpiece; the broken fragment could not be found, and the man proceeded home himself feeling little the worse for his tumble; but from this date until the time I saw him he complained of a pain more or less severe in the left breast, with dyspnoea on exertion and a profuse muco-purulent expectoration, being, however, able to go on with his work. For the above symptoms he applied to me, chiefly with the object of getting on the sick list of a society to which he belonged.

On examination I detected no other symptoms than a slight systolic mitral murmur and loud rhonchi heard all over the chest, which was hyperresonant, the man being the subject of chronic bronchitis.

I applied belladonna plaster over the region of the heart, and gave him a stimulating expectorant mixture, not connecting the episode of the broken pipe with his then condition.

I saw him on two subsequent occasions, and on the last he declared himself to feel so much better that he wished to go off the sick-list and resume his work, which consisted in lifting and carrying various heavy articles.

Exact size of pipe and the fragment of stem impacted in the bronchus.

From that time until August 30th I saw nothing of him, when he walked into my consulting room with the missing piece of pipe stem in his hand, and explained that he had on the previous day, while carrying a heavy weight about 100 yards in a stooping posture, suddenly felt something move inside his chest, followed by a fit of coughing, and to his astonishment the long lost pipe shank dropped out of his mouth on to the ground surrounded by a little coagulated blood and inspissated mucus, he immediately experiencing a sense of relief in his previously embarrassed breathing.

The piece of pipe shank measures $1\frac{1}{2}$ inch by $\frac{1}{2}$ inch, and must have been lodged low down in the left bronchus.

The case, I think, must be almost unparalleled, considering the size of the foreign body and the length of time (three months) it had remained impacted in the bronchus without producing any other symptoms than occasional attacks of pain, dyspnoea, and profuse expectoration. The explanation of the mildness of the symptoms I attribute to the fact that