A CASE OF MALIGNANT PLEURISY.

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A. M., aged 56, born in Glasgow, Scotland, a bachelor and dry goods salesman, consulted me October 25th, 1896, for shortness of breath on exertion. I found very large effusion in the right pleural cavity, and sent him in to St. Michael's Hospital, where he died on March 30th, 1897, a little over five months after.

The signs of effusion I need not dwell on. They were those ordinarily seen. The heart was much displaced downwards about 1 inch, and to the left as far as the anterior axillary line. This malposition it retained with very little change to the last. The onset of the effusion could not be determined. The patient had never any pleuritic pain at any period of his illness. The physical signs presented during the first half of his illness were diametrically the opposite of those seen during the later stages. In the latter half, while the heart remained fixed in its malposition, the hypertrophy of the left lung and the gradual compression of the right, with the failure of the effusion to return, gradually changed the physical conditions to be seen in the thorax, so that in place of the full bulging immobile right thorax of large effusion, one saw the small collapsed fixed chest wall of cured empyema, a chronic cirrhotic disease of the lung. This marked change in general appearance was due to two causes, first, the non-return of the effusion after aspiration; and, secondly, the scirrhous contracting growth which was found *post mortem* spreading *en cuirasse* over the whole pleura, and compressing the lung to much less than its ordinary size.

Aspiration for the relief of dyspnoea had to be done three times—November 7th (about two weeks after admission), when 56 ozs. were removed; again on November 21st (two weeks later), when 80 ozs. were taken; and for the last time on November 17th (six days later), when 81 ozs. were taken, and a full stream still running into the bottle. The fluid removed was on each occasion slightly fibrinous, translucent, of a ruddy straw colour, but distinctly not bloody, though containing some red blood corpuscles. It was quite odourless, and free from purulency. The colour was most ruddy on the first occasion.

Some points of difference may be noted between these aspirations and all others that I have done for pleuritic effusions. First, the relief to dyspnoea was but slight compared with what one should expect. The breath-rate remained absolutely unimproved, running from 28 to 32 as before. This was fully explained by the non-expansion of a lung compressed as this one was found to be. Secondly, the peculiar fixation of the heart in its faulty position, the return towards the normal place not exceeding half an inch. Thirdly, neither before nor after the removal of so large a quantity as 80 ozs. from the right pleural sac could any change in the position of the liver be made out. This very mystifying circumstance was also explained *post mortem*. Fourthly, aspiration was not followed by the pain, coughing, and tendency to syncope so often seen. This, too, is explained by the condition of the lung and pleura found after death. The stem of the needle I used in aspirating was $3\frac{1}{4}$ inches long, and when cautiously but fully introduced for exploratory purposes, while aspiration was going on, could be made to touch first the dome of the diaphragm, then, after an interval of half an inch, the thick rounded lower and outer border of the lung, and above that nothing. What structures could be touched were peculiarly insensitive, and no cough or other signs of discomfort were elicited by gently pricking them with the needlepoint. This also was fully explained by the *post mortem* findings.

About two weeks after the last aspiration a small nodule began to form at the site of the punctures. (They had all been made in the usual place, the sixth interspace in the right mid-axillary line.) This was at first thought to be inflammatory, but as a chain of enlarged glands was soon to be noted running up towards the axilla, a diagnosis of malignancy was made. The axilla very soon filled with shotty glands right up to the apex, and the infection travelled across the base of the axilla and caused distinct enlargement of two or three glands in the ninth interspace behind, in the

line of the angle of the scapula. The nodule at the site of the punctures grew in the sixteen weeks preceding death to the size of a large walnut, but did not involve the skin.

Cough, though fairly persistent through the illness, was never troublesome. During the last few weeks a peculiar sputum was noted, odourless, clear, viscid, amber-coloured, jelly-like, very slightly frothy if at all, and changed in a few minutes by the carbolic acid solution in the sputum bowl into a dead-white opaque nummular mass, evidently highly fibrinous, and probably largely from the tubes of the compressed right lung. The wasted cachectic look of malignant disease did not appear. The colour never resembled that usually seen, though emaciation was distinct.

Throughout the whole five months the subjective condition of the patient varied very little. His temperature ran during the last five weeks almost entirely a subnormal course, and it was never at any time anything over 100° F., and seldom so high. His pulse, to the last, seldom exceeded 100, and never fell below 80.

About one month before death mild œdema of the lower limbs and a slight ascites were noted, both cardiac in origin. Death was due to asthenia, heart failure coming on as he sat in his chair, and not very suddenly.

The points of interest found *post mortem* are as follows:

I.—THE ABDOMEN.

(a) *Kidneys*.—Both cirrhotic and with adherent capsule. Atrophy of both cortex and medulla, with hardening. Stellate scarring and fibrosis specially marked at upper end of left kidney, beneath which scar was found a rough uric acid calculus one-half by one-third by one-quarter inch in size, with two smaller ones as large as wheat grains.

(b) *Liver*.—Much enlarged, left lobe touching left side, and appearing during life as smooth firm mass in epigastrium. Its exact nature had not been determined during life from the disturbance of conditions usually discoverable by percussion and palpation, from the fact that the colon lay in front of the anterior surface of the liver, and had formed a permanent groove across it with marked *ante-mortem* coloration. The dislocation of the liver had been concealed by this cause, though the gall bladder was found to lie an inch and a-half to left of median line. The downward dislocation of the liver was as much as $3\frac{1}{2}$ inches, the highest point of the dome of the diaphragm being at the level of the sixth rib. The organ was much enlarged, slightly pale, and friable. To the right of the broad ligament lay a string of about twenty small white flattish nodules, the size of a split pea, under Glisson's capsule. A similar condition was found in the apposed area of the diaphragm, though there was no adhesion between diaphragm and liver, an instance of what has been noted by other observers that cancer can spread by apposition of tissues without the formation of adhesions. The greater part of the right half of the dome of the diaphragm was thickened, fixed, and adherent to the growth in the thorax. The abdomen contained about a pint of serous straw-coloured ascitic fluid.

II.—THE THORAX.

On opening this cavity, the right half of the sternum with the cartilages of that side, were found very densely adherent to the subjacent mass.

(a) *The Heart*.—Lying horizontally, apex in left anterior axillary line, in sixth interspace. Much hypertrophied, especially right side. Almost quite covered by edge of left lung, which was very voluminous. Heart muscle soft and fatty. Mitral and tricuspid valves thickened round base, and aortic arch large and atheromatous. Pericardium contained about five ounces of serous fluid.

(b) *Lungs*.—Left one very ample, and rather emphysematous. Anterior margin over almost to right edge of sternum, and covering area of heart dulness to the fifth interspace. About 25 ounces of serous fluid in left pleural cavity. Right lung completely compressed and destroyed except for small portion at apex. It was only about one-third the normal size, dark, collapsed, œdematous, lower lobe tough and carnified.

Pleura.—Parietal pleura almost normal. Visceral pleura entirely changed, covering the lung with a layer of whitish nodulated new growth averaging $\frac{1}{4}$ inch in thickness, but in places up to $\frac{3}{4}$, especially at anterior margin, where it formed

a matted mass densely adherent to the sternum and cartilages from the third cartilage down to the diaphragm, which was also infiltrated, fixed, and largely destroyed by adhesions to base of lung. There was in addition a third adhesion, making the axillary growth already mentioned directly continuous through the fifth interspace with the mass in the chest. Apart from these adhesions, the parietal pleura was remarkably healthy. There was in the lower posterior part of the cavity a smooth-walled space containing 10 or 12 ounces of fluid.

There was no secondary or terminal infection in this case. The only evidence noted of inflammatory process was in a small cavity between the layers of the pleura towards the base of the lung behind, which, in addition to some fluid, had its walls covered with a fairly thick layer of recent fibrin. The fluid seems to have been unusually free from blood, which has been noted in large quantity by other observers.

Microscopical examination of the growth, kindly made for by Dr. H. B. Anderson, Professor of Pathology in Trinity Medical College, shows it to be a scirrhus endothelioma, with origin probably in the lymphatics of the pleura. It consists mainly of dense fibrous tissue, with many long slit-like lymphatic spaces, lined by flat nucleated cells of endothelial appearance. The nodule in the axilla is practically identical in appearance with the pleural growth.

Delafield, of New York, describes in his *Textbook on Pathology* two cases almost exactly similar to this, in which the growth was primary in the pleura, and of which he says, after giving a description of the microscopic findings that might apply to my case as well as to his own: "It is very difficult to class these tumours; whether to call them by the name of carcinoma, sarcoma, or endothelioma it is not easy to say." His bibliographical references make it plain that a primary new growth in the pleura does certainly occur. He refers to articles by E. Wagner, Fraenkel, R. Schulz, Birch-Hirschfeld, and Thierfelder; so that the view so positively expressed in *Ziemssen's Cyclopaedia* by Fränzel in his article on Diseases of the Pleura, that "sarcomas or cancers of the pleura are never primary, is no longer tenable."

MEMORANDA:

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

RE-ESTABLISHMENT OF THE MILK-FLOW AFTER AN INTERVAL OF FOUR WEEKS.

On January 13th last I was asked to see Mrs. R.'s first child, aged 6 weeks. For four weeks it had been wholly bottle-fed, having been given first one patent food, then another, each disagreeing in turn. It had been unable to digest any of the foods, and as a consequence was suffering from acute gastro-intestinal irritation. The small, thin, white face, with puckered brows and clenched fists, the anxious and pained expression, the restlessness and half-starved cry, showed at one glance that the baby was suffering from "abdominal distress," and that he was being slowly but surely starved to death unless an entire change could be made in the character of the food given him.

On asking the reason for not nursing her baby the mother told me "that her nipples had been sore and the breasts inflamed," and that when her baby was a fortnight old she was advised by her physician to go to the Toronto General Hospital for treatment. She did so, leaving her baby at home in the care of a young unmarried sister. The mother remained in the hospital a fortnight, recovered from her breast trouble, and had been at home another fortnight when I saw the baby. On examination I found the breasts soft and flabby, but otherwise healthy. I was able to squeeze out of the nipples a few drops of milk, and on the spur of the moment decided to make the attempt to re-establish the milk secretion, and in this way give the baby a chance.

I had the breasts emptied twice thoroughly by means of the fingers (not by the usual breast pump), and later in the day had the baby put to the breast. At first he would not try, but by repeated attempts, and by giving absolutely no other food (except whisky and water by a spoon, not from the

bottle) for 24 or 30 hours, we had the satisfaction of seeing that the baby was willing to nurse as often as the mother would give him an opportunity.

Frequent drinks of milk, gruel, and an occasional glass of ale, with free bathing and gentle massage of the breasts helped to restore the secretion, and within a week the baby was getting all the milk he could take, and in about two weeks the flow was about as free as when the baby was weaned. On April 2nd I was called to see the mother, and on inquiring about the baby was shown a healthy, plump, pink and white, well-nourished baby, apparently no worse for his four weeks of hand feeding.

The practical deductions which may be drawn from this case are: That babies are sometimes weaned for insufficient cause; that it is better and more rational to treat the breasts than wean the baby; that the patent foods on the market are not suitable for infants; that mother's milk is the proper food; that some children will take to the breast again after having been weaned; that the milk-flow may be re-established after at least four weeks cessation from nursing; and that an attempt should always be made to bring about the secretion again if an interval of several weeks has elapsed.

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REPORTS

ON

MEDICAL & SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF GREAT BRITAIN, IRELAND, AND THE COLONIES.

TORONTO GENERAL HOSPITAL.

TWO CASES: PULMONARY CAVITY TREATED BY DRAINAGE, AND
PYLORIC CARCINOMA TREATED BY GASTRO-JEJUNOSTOMY.

[Reported with remarks by F. N. G. STARR, M.B. Tor.,
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Association.]

CASE I. *Offensive Pulmonary Vomica: Drainage: Gastro-jejunostomy for Carcinoma Pylori: Improvement in Health and Weight: Retained Murphy Button.*—A male patient, aged 59, was admitted to the General Hospital on February 26th, 1897, under the care of Dr. A. McPhedran. He complained that on February 20th he had got a severe wetting, and that two days later a pain commenced in the lower part of the left chest. His throat was sore, there was some cough, and he expectorated dark clotted blood, after which some of a brighter colour appeared. The pain in the side increased, and he was unable to recline upon either side. There was no chill. Upon the day following the cough became more troublesome, and a considerable quantity of blood-coloured sputum was expectorated.

On admission the temperature was found to be 100.8° F., and the concomitant symptoms of fever were present. The breath was very fetid. After several careful examinations it was believed that he was suffering from gangrene of the lung. At the end of two weeks signs of a cavity appeared. He expectorated very copiously a foul-smelling sputum. The breath continued very offensive, so much so that the patient had to be isolated in an attic ward. His temperature ranged from 100.8° F. on admission to 103.8° F., and as his general condition became worse and worse operation was decided upon.

On March 26th Mr. I. H. Cameron made an incision in the mid-axillary line over the third interspace. The visceral and parietal pleurae were adherent at this point, and the knife was therefore easily directed through it and the surrounding lung tissue into a cavity. A drainage tube was inserted, outside of which the wound was packed with iodoform gauze and the side dressed. The discharge from the cavity was not offensive at first.

Upon the day following the operation the temperature fell to 99.8° F., and until April 12th it ranged from that to 103° F., when it dropped to normal. It has remained normal since.

At the time of writing (April 30th) the discharge from the