

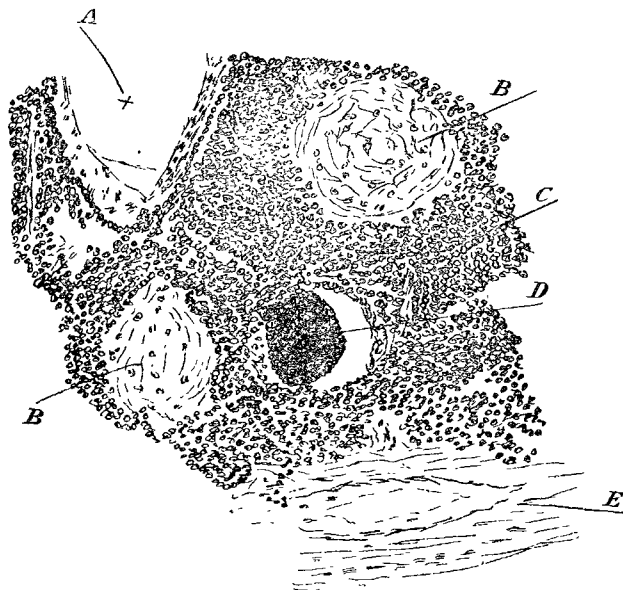
A CASE OF PERSISTENT ABERRANT THYMUS.

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THE patient, a female, aged 24 years, sought advice about a swelling in her neck, which had first been noticed when she was 11 years old, at which time constitutional treatment was tried to reduce it, but it had gradually grown larger and given rise to a marked swelling, situated at the base of the neck on the left side and extending from beneath the posterior border of the sterno-cleido-mastoid muscle to the anterior border of the trapezius and also passing behind the clavicle. The superficial veins over the surrounding area were somewhat engorged; there had never been any pain associated with it. The tumour was felt to be subcutaneous, lobulated, and firm; the skin was freely moveable over it. Removal of the tumour was somewhat difficult owing to adhesions and to extension of the growth deeply into the base of the posterior triangle of the neck on the left side where it had a firm fibrous pedicle which was cut through and ligatured. Primary union followed. The growth, which was of about the size of an ordinary potato, had the structure of a lobulated gland with a capsule and intersections of fibrous tissue. On section, for which I am indebted to Dr. J. Phillips and Dr. F. W. Eurich, it was found to consist of a mass of leucocytes, containing in their midst numbers of Hassall's concentric corpuscles of various sizes, some invaded by the leucocytes. The growth was divided by fibrous intersections, of which the larger contained fair-sized blood-vessels.

Remarks.—Owing to the lateral position of the growth thymus did not suggest itself and the diagnosis was only completed by the use of the microscope. Here I may mention that there was no extension of the growth beneath the sternum or any signs of anterior mediastinal growth present. No instance of such a position of a thymus growth can I find in literature. As regards causation, the patient when younger had grown rapidly and is unusually tall; possibly this abnormal growth of thymus may have some connexion with this just as the opposite conditions are associated. Dudgeon¹ and Fortescue Brickdale² having observed "that in various atrophic conditions in children



Section of tumour. A, Blood-vessel. B, Hassall's corpuscle. C, Small cell infiltration. D, Mass of closely-packed leucocytes. E, Fibrous intersection.

fibrosis of the thymus, with the resulting functional extinction, occurs with great rapidity, so that it has been said that an estimate of the nutrition of an infant may be formed by an examination of the thymus gland."

Prognosis.—In a full and interesting paper in the *Clinical Journal* of Jan. 4th, 1899, on Thymus Tumours Dr. H. D.

¹ Dudgeon: *Journal of Pathology and Bacteriology*, 1904-05, vol. x., p. 173.

² Fortescue-Brickdale: *THE LANCET*, Oct. 7th, 1905, p. 1029.

Rolleston differentiates between (1) simple persistence, (2) hypertrophy, and (3) hyperplasia of the gland. This case corresponds to his description of hyperplasia in which instead of the normal arrangement of the gland found in hypertrophy the whole field is obscured by small round cells resembling the lymphocytes of a normal thymus. The Hassall's corpuscles do not share in the hyperplasia and are only seen in the remains of the normal thymus. There were no signs of malignancy about the growth.

The thymus is itself a paired epithelial tube derived from the third, fourth, and partly from the second branchial clefts; it then undergoes ramification and gives rise to condensation of the connective tissues around,³ which then became infiltrated with leucocytes as soon as they are found in the body; thus the more permanent part of the thymus is formed. The epithelial elements become changed into the concentric bodies known as Hassall's corpuscles.

The accompanying illustration, reproduced from a drawing by Dr. Phillips, illustrates a portion of the section well.

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A SACCULAR DILATATION OF THE SMALL INTESTINE.

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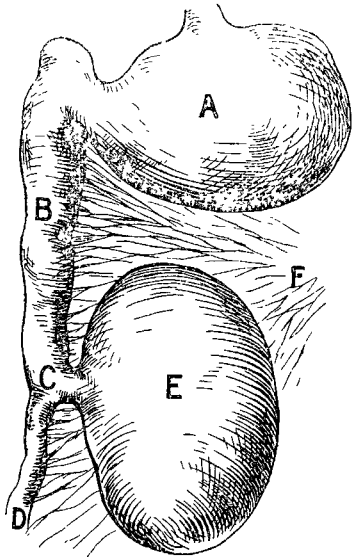
THE following description is that of a remarkable anomaly of development of which I can find no other recorded case. Nor am I able to indicate how the malformation might arise. The patient, from whom it was obtained, was a female infant who died while under my care, at the age of five weeks, in the Metropolitan Hospital on May 14th, 1905. She was admitted on April 27th with a history of vomiting since the third day of life. This had steadily persisted and, after the seventh day, had been associated with diarrhoea. The vomiting followed every meal. Both the vomited matter and the stools were green. She was the first-born child, somewhat small, of healthy parents. Her weight on admission was 4 pounds 13 ounces and she was rather ill-nourished. Nothing abnormal was found on examination except in the abdomen. This was unduly prominent on the right side and a tumour of about the size of a pullet's egg could be felt to the right of, and on a level with, the umbilicus. The tumour presented most peculiar characters. It was fairly moveable, elastic, sometimes dull and at others resonant on percussion, and it would disappear entirely after moderate gentle manipulation. The liver dulness in front was completely absent. An inguinal hernia was present on the left side.

On May 3rd the patient's condition was quite unchanged. Vomiting was infrequent. There was no diarrhoea and the stools were small, formed, and green. She was then fed on whey and given small doses of cocaine. She took food well, the vomiting ceased, and the stools became almost normal. On the 7th she weighed 5 pounds 2 ounces. On the 10th she was put on feeds of diluted milk. Two days later vomiting began again, but it stopped after two doses of cocaine and a return to the diet of whey. Apparently she was going on well, but on the 14th she had a convulsion, with carpo-pedal spasm, cyanosis, and unconsciousness. After about ten minutes she revived. On the following day she became very feeble and cold and died from asthenia. There was no return of vomiting or diarrhoea.

Post-mortem examination.—On opening the abdomen a cyst with opaque walls was seen immediately below the liver. The transverse colon was pushed downwards and the liver upwards, so that the edge of the latter was not visible, thus accounting for the absence of liver dulness anteriorly during life. The liver was very much flattened. The gall-bladder was very small and its tip was one and a half inches from the edge of the liver. The cyst was considerably larger than the stomach, which was of normal size. Roughly the cyst measured three inches vertically, two inches transversely, and one inch in the antero-posterior diameter. It was situated in the mesentery, arising from the gut at a distance of 15 inches from the pylorus. It communicated with the gut by two adjacent openings close together, the larger one being as big

³ Gulland: *Laboratory Reports of the Royal College of Physicians of Edinburgh*, vol. iii., p. 172.

as a threepenny-bit and the smaller one quite minute.¹ The edges of the openings were smooth and irregular. In general appearance the cyst can be best described as similar to a saccular aneurysm of the aorta with a small orifice. The duodenum and a small part of the jejunum above the origin of the cyst were much dilated and hypertrophied, while below the intestine was thin-walled and collapsed. Opposite the cyst the lumen of the canal seemed somewhat narrowed from pressure but there was no true stricture. Both cyst and intestines contained normal bile-stained contents. Microscopically, the wall of the cyst was identical with that of the intestine from which it arose, the muscular tissue being considerably hypertrophied.



Diagrammatic representation of the sac. A, Stomach. B, Hypertrophied and dilated duodenum and jejunum. C, Constriction at level of opening into the sac. D, Thin gut below the constriction. E, Sac. F, Mesentery.

Thus the post-mortem conditions clearly explain the symptoms present during life. The vomiting was due to pressure of the cyst, when full, on the lumen of the canal, causing intestinal obstruction. The alterations in resonance, the moveable character, and the disappearance of the tumour on manipulation were the results of the variable amount of distension of the cyst and the gradual emptying of it by gentle pressure. This also explains the variable character of the vomiting. When the cyst was more or less empty the obstruction produced by pressure of the cyst on the intestine would be absent.

Naturally the diagnosis was extremely difficult. Although life might have been saved by surgical measures I did not feel justified in recommending operation. The history of persistent vomiting, beginning a few days after birth, suggested intestinal stenosis. Congenital hypertrophic stenosis of the pylorus could be excluded by the character of the vomiting and the presence of bile in the vomited matter. Moreover, such a diagnosis would not explain the presence of the tumour. After careful consideration I took the view that the case was one of incomplete stenosis of the gut, due to a congenital defect of development, and that the variable tumour was the result of dilatation of the gut above the stricture, increased at times by peristaltic contractions. Its disappearance I thought was due to intestinal gas and other contents being forced through the narrowed channel by gentle manipulation. The fact that a diet of whey could be absorbed and caused a marked diminution of vomiting, indicated that there was a reasonably patent opening. For that reason I postponed surgical interference in the hope that the child's condition would improve sufficiently for it to undergo operative treatment.

It is conceivable that a true mesenteric cyst might arise in a similar manner, being cut off entirely from communication with the intestinal tract. Gradually increasing distension would lead to thinning of the wall to such an extent that it might be impossible to recognise its structure.

Upper Brook-street, W.

¹ In the diagram too distinct a neck is ascribed to the sac.

PNEUMOTHORAX DUE TO MUSCULAR EXERTION IN A HEALTHY LAD.

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ON Nov. 8th, 1905, a strong athletic lad, aged 18 years, was playing as a forward in a football match. 40 minutes from the start he obtained the ball and ran with it until he came to the back, over whose head he kicked it. The ball went out of play and he stooped down to pull up his right stocking. Whilst doing this he was seized with severe cramp-like pain in the right side of his chest just below the nipple. He was unable to continue playing. A medical man on the field examined him and finding great dyspnoea thought he had broken a rib and applied a towel to support the chest wall. The lad was carried to a house near by where I saw him two hours after the injury. He was propped up in bed suffering from considerable pain in the chest and great dyspnoea. The respirations were about 60 per minute and the pulse was 72. The pain was located below the right nipple, at which point friction could be heard. Discomfort was also felt in the epigastrium and at the root of the neck. No fracture of the ribs could be detected and it seemed to me that the diagnosis lay between a rupture of the diaphragm and rupture of the intercostal muscles. I strapped and bandaged the chest, which gave great relief. On the next day his respirations were 40, his pulse was 72, and his temperature was 99.4° F. This was the only occasion on which there was any rise of temperature. A short cough suggestive of pleurisy was present. There was not at any time any expectoration. I came to the conclusion that the diaphragm was uninjured as the breathing was chiefly abdominal and free from pain. It occurred to me that the symptoms might be caused by a rupture of the lung and I kept a sharp look out for signs of pneumothorax.

On Nov. 12th, the fourth day after the onset, all typical signs of pneumothorax were present—viz., bulging and loss of movement of the right side, displacement of the heart's apex to the left of the left nipple, obliteration of the liver dulness which gradually diminished until it entirely disappeared, hyper-resonance on percussion, absence of normal breath sounds, amphoric breathing and the bell sound. On this day the respirations were 24. On the 17th I introduced a fine trocar and cannula without any benefit. On the 19th respirations were 18. On the 29th air was drawn off with an aspirator. On Dec. 5th the heart's apex beat was in the normal position and on the 12th all signs of air in the pleural cavity had gone. At the time of puncture and aspiration no fluid of any kind escaped from the chest.

Remarks.—Simple pneumothorax from muscular effort is so rare that every case is worth recording. Stephen Paget¹ says: "A few cases seem to show that a severe strain may cause slight laceration of the surface of the lung and pneumothorax, even though the lung be healthy." I believe that this case comes under this category.

The ordinary explanation given of pneumothorax is that it is due either to rupture of a superficial tuberculous focus or to rupture of an emphysematous bleb or tearing of a pleuritic adhesion. In the case under consideration there was no suspicion of tubercle. The lad was previously perfectly healthy and the son of healthy parents. There were no evening rise of temperature and no cough except on the day following the injury. There was no expectoration and there was no effusion of anything but air into the pleural cavity. The "rupture of an emphysematous bleb" theory is more probable but there had been no illness likely to cause emphysema and the severity of the symptoms at the beginning of the attack, before pneumothorax was detected, pointed to a more serious injury than the rupture of a small bleb. The tearing away from the surface of the lung of a pleural adhesion might explain the pneumothorax but there was no history of any antecedent pleurisy. On the whole the evidence rather points to a superficial rupture of the lung near its lower anterior margin. A distended lung is more easily lacerated than an empty one and the lung would naturally become engorged by hard running such as is necessary at football. When any part of the lung is suddenly compressed it may burst. In the case under notice

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—During 1905 the "Newport Workmen's Fund" raised £1861 for the funds of the Newport and Monmouthshire Hospital.

¹ Surgery of the Chest, p. 66.