such an action; nor is this disproved by the recent and important experiments of Payr. He transplants one lobe from the neck of a dog into its spleen; by a later operation he excises the lobe remaining in the neck—this produces no ill-effect; and by a third operation he removes the spleen with the transplanted thyroid lobe in it—this is followed by the death of the dog. By the aid of the experience gained in these experiments Payr performed an important operation on the human subject. He had under his care a cretinous child, aged six and a half years. The child had been treated by thyroid feeding almost without result. Payr excised part of the thyroid of the child's mother and planted it in the spleen of the child, with the result that the child was greatly improved.

Notwithstanding the foregoing objections it may well be that the enlarged thyroid of Graves's disease does yield an excessive secretion, that this is injurious to the economy, and that these ill-effects may be relieved by the administration of the milk of thyroidless goats, a treatment suggested and practised by Lanz. To this treatment it may be objected that even if the blood serum of the goat contains an antidote this would not pass into the milk, which is a secretion and not a transudate. In this connexion it may be pointed out that if after total thyroidectomy in the dog the removed lobes are simply dropped back into the wound before it is closed the symptoms resulting will be altered; the dog will die, but it will live a few days longer than it otherwise would and it will not have the tremors, paralysis, and convulsions which usually follow the operation, but will die from asthenia. This difference is presumably caused by the absorption of the replaced lobes.

Following these lines I removed from three cats the thyroid gland and fed the cats on ordinary cow's milk. Two of these cats died with the usual symptoms, tremors and paralysis, in four and five days; the third died from asthenia in 15 days. In three other cats the same operation was performed and they were fed subsequently on the milk of a thyroidectomised goat. None of the three had tremors or paralysis; they died from asthenia in 9, 12, and 14 days. The fact that not one of these three cats had the usual symptoms certainly suggests that the goat's milk contained some special constituent.

In a disease like Graves's, in which many of the cases greatly improve under any reasonable treatment, it is not easy to say with confidence that any particular remedy has done good. However, there are several cases on record in which the milk treatment of Lanz seems almost certainly to have been of benefit. Thus Lanz himself gives one case so severe that from his previous experience he expected the patient to die who yet made a good recovery. Other satisfactory cases have been recorded on the continent and one in America.

The first case at the Prince of Wales's Hospital treated in this way was that of a young woman, aged 23 years, under the care of Dr. R. Murray Leslie, to whom I am indebted for permission to refer to the case. The patient was first admitted in August, 1906 She came with a history of having had a month or two previously an attack of rheumatic fever. On admission she was suffering from palpitation, with a pulse of 120, slight prominence of the eyes, and a soft pulsating goitre which gave a blowing sound on auscultation. She improved under rest and medical treatment and went out on Oct. 22nd. Her weight at this time was 7 stones 5 pounds. After her return home she became worse and was readmitted to the hospital on Jan. 3rd, 1907. Her weight was now 6 stones 10 pounds. She had marked exophthalmos so severe that she could not completely close her eyes. The thyroid gland was greatly enlarged with a loud systolic murmur over it; there was also a systolic murmur at the heart's apex. The pulse was 120 There were marked tremors of the hands. The patient was at first placed on the same treatment as she had done well on before. After a few days she was ordered rodagen, which she took for one month without any benefit. Her weight was now 6 stones 9 pounds. She was then put back on her former medicine and also had some applications of the x rays to the goitre. She did not improve, but lost flesh considerably, her weight on March 26th being 5 stones 12 pounds. She was now given the milk of a thyroidectomised goat, taking for some time the whole of the milk which the goat gave. The patient now gradually and markedly improved. Her weight steadily went up; on May 7th it was 6 stones 11 pounds and on June 18th (shortly before she left) it was 7 stones 1½ pounds. Besides this she felt, and obviously was, much better and stronger; the goitre and exophthalmos were somewhat less and the pulse-rate was about 105.

The second case was not in the hospital but occurred in the practice of a medical friend. The patient, a married woman, aged 48 years, was first seen in April, 1907. She complained of palpitation, of feeling weak, and of loss of flesh. Her weight, formerly 11 stones, was now 9 stones. The eyeballs were prominent and there was slight thyroid enlargement. The pulse was 120. She was treated with bromide, belladonna, digitalis, and arsenic without any good result. On June 18th she was kept in bed and Leiter's tubes were applied to the goitre. The pulse was 120. On July 9th she began to take milk from thyroidectomised goats. She gradually improved. On the 26th she began to get up. On August 17th the pulse was 84. On Oct. 17th she had continued to improve, her weight was 8 stones 4½ pounds, and the pulse was 80. She was still taking a small quantity of the milk (the yield of the goats was at this time diminishing). On Dec. 14th her weight was 8 stones 12 pounds and the pulse was 84. She ate and slept well. There was very little palpitation. She could do a little light household work. While taking the milk the only medicine given was bicarbonate of sodium and gentian.

A third case was also under the private care of a friend. The patient was a woman, aged 26 years. About nine years ago she developed unilateral proptosis without any other symptom. She had had two severe attacks of influenza, the last two years ago. After the second attack she had a cerebral seizure, falling and becoming momentarily unconscious. This was followed for a time by convulsive movements of the left arm, which were worse during sleep; this slowly passed off. About a year ago the patient one night felt a pain in her throat and on putting her hand up to her neck found a swelling which proved to be a goitre. After this the second eye became also prominent. Besides this she had slight choking attacks at night and was very restless in her sleep. She was treated for several weeks with drachm doses of rodagen twice a day; this did not produce the slightest improvement. On July 25th she commenced taking about one and a half pints of the milk of a thyroidectomised goat a day. There has been no material change in the pulse-rate, which has usually been under 100, or in the weight, which has been fairly steady at about 8 stones 12 pounds. But there has been considerable improvement in her general condition, as shown by her subjective sensations and the observations of her friends; also the attacks of palpitation to which she was subject have become less frequent. The exophthalmos, which was throughout slight, has not altered.

There is no great difficulty in carrying out this treatment, especially in the country. Goats take ether well; the thyroid gland in them consists of two separate lobes lying one on each side of the trachea; there is no isthmus. As far as my experience goes it is best to choose an animal two or three years old and to operate about three or four weeks after kidding. Goats as a rule have their young in the spring.

That others may be induced to try this treatment this year is my reason for what I fear may seem to be a premature publication of results.

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Devonshire-place, W.

A CASE OF ACUTE SUPPURATION IN A THYROID ADENOMA DUE TO THE BACILLUS TYPHOSUS.

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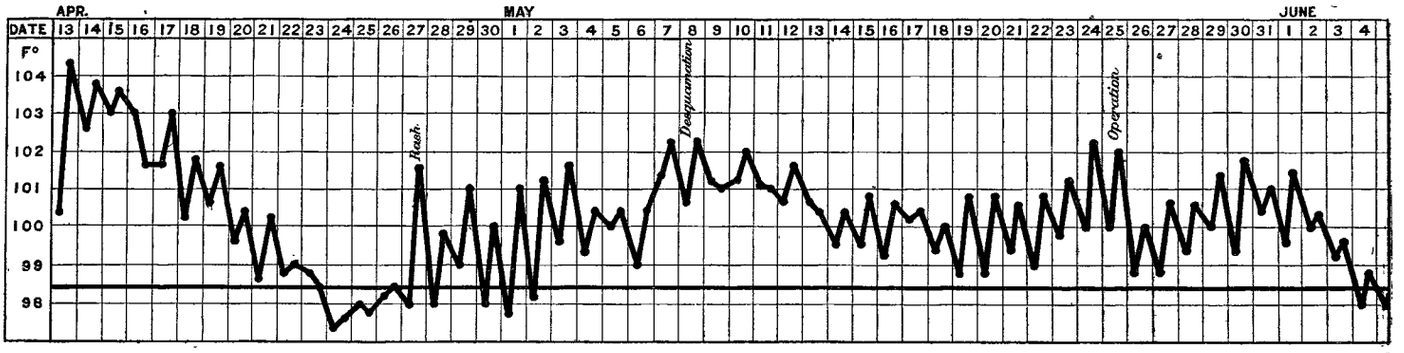
THE patient, an Italian, aged 26 years, was admitted to the Italian Hospital on April 13th, 1907. His illness dated from four days previously. His pulse-rate was 116, the respirations were 36 per minute, and there were signs in the chest of acute pneumonia. On the 21st, the twelfth day of illness, the temperature came down to normal but the

general condition of the patient did not improve. There was great prostration and frequent vomiting, the vomit consisting first of thin yellow and later of dark green material. The tongue and mouth were in a very foul condition. This state lasted for six days. On the 27th the temperature again rose to 101·6° F. and the pulse to 136 per minute. A generalised erythematous rash, accompanied by severe sore-throat, appeared and persisted for three and a half days. A diagnosis of scarlet fever was made and the patient was isolated. He had some diarrhœa but there was nothing noteworthy in the stools. From the 27th to May 3rd the temperature was intermittent. Nothing abnormal was detected in the chest and a gradual improvement in the general condition followed, the vomiting ceasing and the tongue becoming clear. The urine had constantly contained albumin. On the 8th desquamation began and during the next fortnight the temperature remained considerably elevated (see chart).



About May 20th or 21st the patient first complained of pain in the neck and a tender swelling was discovered in the region of the right lobe of the thyroid. The patient then told us that he had known of the existence of a swelling in this situation for some years but that it had not caused any symptoms. By the 24th the tumour had rapidly increased in size and was exceedingly tender. It moved up and down on swallowing but did not cause any dyspnœa or dysphagia. The swelling occupied the greater part of the right lobe of the thyroid; it was globular in shape, very elastic, but not definitely fluctuating. The left lobe was normal and the trachea was displaced to the left side of the mid-line. The temperature, which had continued to be intermittent, rose on the evening of the 24th to 102·2°. A diagnosis of suppuration in a thyroid adenoma was made.

On May 25th a transverse incision was made over the lower part of the swelling. The infrahyoid muscles were found to be œdematous and adherent to the swelling; they were divided and then peeled off its surface. An attempt was made to enucleate the tumour, but in doing so it was ruptured and two ounces of pus were evacuated. A couple of drainage-tubes were placed in the cavity, one of them being brought out at the posterior border of the sterno-mastoid through a separate incision and the other one through the middle of the incision, which was only partially closed by two or three stitches, the rest being packed with gauze. The tubes were left out on the 29th. By June 17th the incision had quite healed, and all pain, swelling, and tenderness had disappeared. For a week after the operation, in spite of the local condition being quite satisfactory and of there being no evidence of insufficient drainage, the temperature remained constantly above normal. The pulse-rate was about 100, and the respirations were 24 per minute. On June 4th the temperature came down to normal permanently and convalescence was thereafter uninterrupted.

Films made from the pus at the time of the operation showed that the cells were nearly all polynuclears, and very few organisms were seen. Cultures, however, gave a copious and pure growth of a non-Gram-staining motile bacillus, which on further chemical examination gave the fermentation and other reactions of the typhoid bacillus in a typical manner. The bacilli were readily clumped by a human and animal typhoid serum in high dilutions. The patient's own serum with a 1 in 50 dilution gave a positive Widal's reaction on two separate occasions at a week's interval. There can be no doubt that this was a case of suppuration in a thyroid adenoma due to the typhoid bacillus.

The interesting point is, from what source did the organisms reach the gland? As already described, the illness was by no means of the ordinary typhoid type, and after the bacilli had been found we carefully examined the abdomen for enlargement of the spleen but failed to detect it or any other abnormal condition suggesting typhoid fever. The stools did not at any time have the characters of those of a typhoid patient. Moreover, the patient made such a rapid recovery that he was able to leave the hospital on June 22nd. We questioned him as to his having had typhoid fever in the past, but we were unable to satisfy ourselves on this point.

We have thought this case to be worth publishing because an acute abscess in the thyroid, though a well-recognised condition, is not of very common occurrence, and when it does occur, apart from traumatism, such as puncturing a cyst, is most often observed in connexion with an acute febrile disease and generally at a late stage of the illness. Typhoid fever is one of the commoner of such diseases to be followed by an acute thyroiditis and usually the abscess is a late complication. In this patient the signs developed at the end of the sixth week from the beginning of the illness. As soon as suppuration has occurred the pus should be evacuated, or if the abscess has developed in an encapsuled tumour enucleation should, if possible, be performed. If left, the pus is very likely to penetrate the gland capsule, leading to diffuse cellulitis of the neck and mediastinum or to burst into the trachea or pharynx. Whichever of these events occurs the result is likely to be very disastrous. And free drainage must be provided at the time the pus is let out. The incision should not be closely sutured; if a transverse incision is made the scar is very little noticeable. In this patient it is a thin curved line.

We are indebted to Dr. W. d'Este Emery for kindly undertaking the pathological investigation.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF FENESTRATION OF THE ANTERIOR PILLARS OF THE FAUCES.

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THE exact mode of origin of this peculiar condition is a disputed point. Some of the cases recorded were considered to be congenital, in others it is believed to be caused by ulceration due to scarlet fever. I consider that this case looks like a congenital defect on account of (1) the absence of any cicatrices or unevenness in the margins of the fenestræ; (2) the bilateral symmetry of the malformation; (3) the arrangement of the strands of mucous membrane and the muscle fibres, and that they obviously correspond to the anterior pillars of the fauces, as shown in the drawing; and (4) the fact that although the posterior faucial pillars do not show fenestration yet the palato-pharyngeus muscles are collected into a separate bundle of fibres on each side, with only a thin layer of mucous membrane in continuity with the lateral walls of the pharynx. Thus, in front the palato-glossus muscle forms a separate bundle, passing down to the tongue, and forms the inner boundary of a