GENERAL DEDUCTIONS.

The general deductions which might be drawn from the subject they had been considering were:

That a large proportion of inflammatory diseases of the skin were of compound origin.

That there was frequently a microbic element, and that this too might consist of more than one kind of microbe superimposed on another, such as the staphylococcus aureus on the streptococcus pyogenes, the staphylococcus on the seborrhoeic microbacillus, the seborrhoeic microbacillus on the bottle bacillus, etc.

That not only did these several mixtures produce different forms of dermatitis, but that even the same microbe might produce different forms according to its mode of implantation in the skin.

That the microbic element generally required a suitable soil for its successful implantation and propagation; that this soil varied with the age of the individual, the kind of skin he possessed, of which the modifications might be congenital or acquired, and certain of the tissue proclivities to special diseases were probably hereditary.

That intestinal and probably other visceral toxins and ptomaines played an important and often unsuspected part in producing many forms of eruption, and even that many supposed gouty eruptions were really of toxic origin from the generally present intestinal catarrh.

That many of these toxins acted through the vasomotor nerves, central or peripheral, rather than directly on the skin, though they might act directly on that also.

That the cerebral nervous system acted chiefly as a controlling influence over the sympathetic system in regard to the intensity of the eruption.

That with very few exceptions the nervous system, whether vasomotor or cerebral, exercised but little influence on the character of the eruption, though it did on its distribution and intensity.

That the character of the eruption was mainly due to individual peculiarities or proclivities, of which they could often only chronicle the result without being able to explain it.

That while with apparently the same etiology different eruptions might ensue in different individuals, in recurring eruptions in the same individual there was a remarkable constancy in the characters of the eruption and in its time and place of development.

That many general eruptions were for a long or short time of local origin, occupying only a small area before generalization.

That other serious affections started from apparently trivial causes such as seborrhoea, a superficial pustule, etc., and that it was important therefore to treat affections of the skin in as early a stage as possible, as most inflammatory eruptions had a much greater tendency to further development than they had to spontaneous involution.

That the principles of treatment depended on the due appreciation of the relative importance in any one case of the microbic, the personal peculiarities, the nervous system, and the toxic elements, and that as far as their knowledge extended the general principles of medicine applied to them, but that as their power of estimation was often at fault they had to fall back on certain so-called specifics, which experience had shown to be of service in certain conditions.

That the most reliable and comprehensive specifics were arsenic, salicin, thyroid, quinine in large doses, and potassium iodide; the first two had a wide range as compared with any others.

That except as regards pustular eruptions, and those demonstrably of microparasitic origin, the character of the local treatment depended comparatively little on the diagnosis of the particular kind of dermatitis, the extent, intensity, and localization of the inflammation being the most important elements.

That in employing microbicide treatment in superficial and widespread eruptions the microbicide should not be irritating, or at least be capable of being at once neutralized, otherwise the increased inflammation set up defeated the aim of the therapist, and afforded a favourable soil for further microbic developments. It was in comparatively few circumscribed microbic diseases, such as impetigo contagiosa, boils, and carbuncles that the microbicide was the sole curative agent.

That in all widespread forms of dermatitis rest and equality of temperature were the most important and often the most essential curative means.

Finally, that in proportion as they studied diseases of the

skin in the same manner as they studied diseases of other organs, they would find that their treatment could be successfully carried out on the sound basis of pathology, and that specifics would occupy a diminishing space in their armamentarium.

The statistics given in the first lecture showed that the task of acquiring the power of diagnosis, such as every practitioner should possess, was not difficult in the majority of instances, as three-quarters of all cases of dermatitis were comprised under a very small number of diseases; but a considerable practical experience was necessary to grapple successfully with the variations which even these few common diseases presented according to the several conditions already discussed, but attention to these points would gradually make this easier, and would bring success which would add interest to the further study of a class of diseases which was a sealed book to many otherwise well-informed medical men, because they had not started on their investigation in a systematic manner.

CONGENITAL GOÏTRE.

By JOHN T. HEWETSON, M.D., F.R.C.S.,
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CONGENITAL bronchocele is sufficiently rare and of such peculiar interest that I am induced to publish the following case. The specimen was sent to the Birmingham University Pathological Museum a few months ago. In this country comparatively few cases have been recorded, and only a small percentage of these have been described in detail. Dr. Ballantyne¹, who has seen one case of congenital goitre, gives a brief summary of our knowledge on the subject, together with a brief bibliography. I would specially draw attention to two cases recorded by Sir J. Y. Simpson² in 1855, and Prof. A. R. Simpson³ in 1886; in both the mother had been taking potassium chlorate during pregnancy. Mr. James Berry⁴, in his excellent monograph upon *Diseases of the Thyroid Gland*, refers to several cases met with by him in practice, in literature, and in various museums in this country and on the Continent.

These congenital goitres generally assume one of three great types—

1. *Adenomatous*, being perfectly encapsuled tumours, occurring in the substance of the thyroid gland, containing one or more cysts, and frequently masses of cartilage.

2. *Parenchymatous* goitre, which is similar in all respects to the same variety seen in adults.

3. *Vascular* goitre is probably the commonest variety, in which the acini of the tumour remain fetal in character, showing an entire absence of colloid matter. Large blood vessels and widely dilated blood sinuses are present in considerable numbers. In this type cyst formation does not appear to take place.

Heredity plays a very important part in the causation of congenital goitre. Demme⁵ in Switzerland collected 642 cases of goitre, 53 of which were congenital. Of these 53, 14 of them were from parents who both suffered from goitre, 23 in which the mother alone was goitrous, and 16 where neither parent suffered. The male child is more prone to congenital goitre than the female.

Many of these goitrous children are born prematurely or are stillborn. Of those that survive birth a considerable number die soon after birth, due to pressure of the growth upon the trachea, oesophagus, vessels or nerves of the neck. The milder forms of goitre tend to disappear spontaneously or are cured by some form of iodine inunction. The severer forms call for operative interference, and are dealt with on the same principles as acquired goitre. Hitherto operative measures have met with little success, though Schimmelbusch has recorded a successful case.

History.

For the following note bearing upon the reproductive history of the mother I am indebted to Dr. G. A. Gibb, Birmingham, in whose private practice the birth took place:

Mrs. B., aged 32, the wife of a working mechanic, has been married six years. During that time she has given birth to six premature children, excluding the child under discussion. The first was born dead at the fourth month, the second lived a few hours and was a seven-months child, the third about the third month, the fourth a stillborn child at the end of the seventh month, the fifth at the end of the third month (placental calcareous), the sixth at the end of the tenth week. The seventh

child, which furnishes the specimen of congenital goitre about to be described, was born at the end of the seventh month. "The labour came on unexpectedly. I saw her within an hour of the commencement of her pains, and found the os fully dilated. A tense bag of membranes presented, but no fetus could be felt per vaginam. On the membranes being ruptured, the liquor amni escaped with great force, and nearly a chamberful was collected, besides what escaped on the bed and floor. The fetal head at once descended into the pelvis, and was born with a few pains. The child cried strongly when born, and continued to do so while the cord was being tied. It was then lifted by the nurse, rolled in flannel, and placed on the bed. On examining it five minutes later, it was found to be dead. The placenta looked healthy, no degenerative patches being visible anywhere. The mother made a good recovery."

No history of syphilis could be obtained, and there was nothing in the condition of the uterus discoverable which could account for the premature births. The mother never had any antisyphilitic treatment during any of her pregnancies until the last. About the fourth week of this seventh pregnancy Dr. Gibb prescribed for her 12 gr. of potassium chlorate and 9 gr. of potassium iodide daily. This amount was slightly reduced when the child became viable, but was continued up to the day when labour set in. She has excellent health and a comfortable home. There is no history of a goitre either upon the maternal or the paternal side of the family. The parents have lived in Birmingham all their lives. None of the previous six fetuses showed any sign of goitre. At the present time the mother is bearing her eighth child, which has had so far about seven months of intrauterine life.

Fig. 1.—From a photograph of a cast of the child.

Description of Tumour.

The specimen is that of a fetus of the male sex, well developed, well nourished, somewhat undersized, with no apparent abnormality other than a bronchocele. The length of the child is 17 in. Its neck presents a distinct tumour identical in appearance with that of an enlarged thyroid gland. It extends as high as the lobule of the ear laterally, and fills up the entire space between the lower jaw above and the sternum and clavicle below. The isthmus between the two lobes extends from the sternum above to the level of the hyoid bone. The tumour is bilobed and in every respect conforms to the clinical condition seen in parenchymatous enlargement of the thyroid gland. The accompanying photograph is that of a cast made from the child. The tumour is

movable, smooth on the surface with no palpable nodulation. It is moderately firm in consistence and does not fluctuate at any point. It appears to be in part substernal in position. The right lobe is slightly larger than the left. There is no undue congestion of the head or neck. On passing a soft bougie down the oesophagus it becomes arrested at a point 3 in. from the gums, and it was only after considerable pressure that a No. 6 urethral bougie could be made to pass.

Fig. 2.—Anterior view of thyroid tumour with thymus gland. Right lobe: Vertical diameter, $1\frac{1}{2}$ in.; lateral diameter, $1\frac{1}{2}$ in.; antero-posterior diameter, 1 in. Left lobe: Vertical diameter, $1\frac{1}{2}$ in.; lateral diameter, 1 in.; antero-posterior diameter, 1 in.

On dissection it was soon evident that the tumour was a bronchocele a little larger than a hen's egg; consisting of two lobes, of which the right was rather larger than the left. It was a general enlargement of the thyroid gland, smooth on the surface, white in colour, and firm to the touch.

Fig. 3.—Posterior view of the specimen showing how the oesophagus was compressed between the two lobes. Thymus gland below.

The vessels supplying the tumour with blood were unusually large. Its capsule was very vascular, being surrounded by a rich network of large veins. The posterior surface of the growth showed the two lobes to be almost touching each

other, and distinct nodular outgrowths from the general surface. One of these nodules growing from the right lobe encroached upon the oesophagus and constricted its lumen very considerably. Similar nodosities projected from the lower lateral margin of the tumour. From the upper margin of the lobes, just in the position where the body of the tumour joined the isthmus, which, however, in this specimen was entirely absent, sprang two peduncles which passed upwards in front of the thyroid cartilage, and became united in a small glandular mass about the size of a hazel nut, the top of which lay in front of the hyoid bone, and was adherent to it. This pyramid was arranged in a foliated manner, and formed the only bond of union between the two enlarged lobes of the thyroid. No colloid matter was visible through the capsule of the bronchocele, as is frequently the case in ordinary parenchymatous growths.

The trachea was entirely surrounded by the tumour, but apart from a little lateral compression its lumen was not encroached upon. The oesophagus, on the other hand, was firmly compressed between the posterior and upper extremities of the two lobes, so much so that even in the dissected specimen a No. 8 urethral bougie could be made to pass this constricting point only after considerable force was used. The carotid arteries and jugular veins were pushed outwards by the tumour but not compressed. The vagus and sympathetic nerves were displaced in the usual way, but were not unduly pressed upon. The lower extremity of each lobe was below the level of the upper margin of the sternum, and firmly attached to it was the upper extremity of a large thymus gland, which passed downwards into the superior mediastinum. A patent ductus arteriosus still existed in the specimen when dissected. Cut sections of the goitre, to the naked eye, are white and solid, showing a few open mouths of blood vessels.

Microscopical Examination.

Sections of the bronchocele under low power (two-thirds objective, No. 4 ocular, 150 diameters) presented an irregular and delicate meshwork of fibrous tissue in whose spaces cells were irregularly scattered. Large blood sinuses were seen here and there throughout the field, as well as large, well-developed arteries and veins.

Fig. 4.—Low power, 150 diameters.

Under high power (objective one-sixth, ocular No. 4, 640 diameters), a very delicate stroma is revealed, arranged in complex and irregular meshes. It does not present the same regularity of shape or arrangement of the acini, as seen in the healthy gland. The meshes representing acini vary considerably in size, though none are very large. They are irregular in shape, and are lined by small round or cubical cells, sometimes in one layer though generally in several layers. Frequently, however, the cells seem to be irregularly scattered in the meshes, more towards the periphery of the acini than towards the centre. The acini are occasionally completely filled by cells, and form solid columns. The cells are often indistinct in outline, and appear to be undergoing degenerative processes. The nuclei

are always very distinct, and take on stains very well. No colloid matter is visible anywhere.

Fig. 5.—High-power (640 diameters) showing character of alveoli.

Large blood sinuses are visible throughout the sections; they are lined by a single layer of endothelium, and are full of blood. There is little or no extravasation of blood into the acini. Numerous well-formed blood vessels, with distinct muscular coats, are also present.

Fig. 6.—Showing large blood sinuses and fetal character of acini. (Magnified 640 times.)

In the character of the alveoli and vascularity the condition resembles very closely that met with in exophthalmic goitre.

REMARKS.

This specimen clearly belongs to the congestive or vascular type of congenital goitre; there is an entire absence of cyst formation and colloid matter. The cases recorded by Sir J. Y. Simpson in 1855, and Professor A. R. Simpson in 1866, are very similar to the case just described. They are all from non-goitrous multiparous mothers who never gave birth to goitrous children before. They were all the subjects of numerous premature labours, for which potassium chlorate was given; and in this case potassium iodide also. Sir J. Y. Simpson's case lived eight hours, in Professor A. R. Simpson's case the tumour gradually disappeared, and at 4 years of age the child was perfectly healthy.

The coexistence of hydramnion is of some interest. Other specially noteworthy points illustrated by the specimen are the absence of an isthmus to the thyroid tumour, the very perfect pyramidal process, and the marked compression of the oesophagus between the two lobes.

It would have been valuable if the cases published in 1855 and 1865 had been described in detail, especially with reference to the morbid histology of the goitres. The administration of potassium chlorate in each case is a striking fact; whether this had any causal relation to the goitre or not is difficult to answer. Nevertheless, it is very significant that these almost identical cases of congenital bronchocele should follow the administration of potassium chlorate during pregnancy. Of course the fact remains that potassium chlorate is given during many pregnancies without the appearance of goitre in the child, and yet, through a combination of conditions present in these three specimens, the potassium chlorate may be a very important factor in the production of the thyroid enlargement. By the short description of Sir James and Professor A. R. Simpson's cases I should infer that they belonged either to the congestive or the parenchymatous types of goitre, which are the varieties that might arise from some such cause as the administration of potassium chlorate.

In conclusion, I wish to thank Dr. Thomas Wilson, who kindly sent the specimen to my department of the museum, Professor Leith for placing it at my disposal, and Dr. Miller for making the drawing of Fig. 6 for me.

REFERENCES.

¹ Ballantyne, *Antenatal Pathology and Hygiene*, p. 376. ² J. Y. Simpson, *Month. Journ. Med. Sc.*, vol. xx, p. 350, 1855. ³ A. R. Simpson, *Glasgow Med. Journ.*, 3 s., Pt. 1, p. 181, 1866-7. ⁴ James Berry, *Diseases of the Thyroid Gland*, p. 15. ⁵ Demme, *Krankheiten der Schilddrüse in Gerhardt's Handbuch der Kinderkrankheiten*, Tübingen, vol. iii, Pt. 2, p. 392.

SIX CASES OF GOÏTRE,

ONE ASSOCIATED WITH AN ATTACK OF ACUTE MYXOEDEMA AND FIVE SUCCESSFULLY TREATED WITH THYROID EXTRACT.

By ED. MARTEN PAYNE, M.B., C.M.ABERD.,
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I THINK there is reason to believe that goitre is much more common in this country than is usually supposed; at any rate I am constantly meeting with cases in unexpected places and where they appear to have already passed unnoticed. All the following six cases, I think, show some characteristic worthy of recording and all except the first (which I had no opportunity of treating) showed a marked improvement under the influence of thyroid extract.

CASE I.—This case is remarkable for the enormous size of the enlarged gland. The two photographs, Figs. 1 and 2, speak for themselves. The patient was born at Stepney and was 38 years old when the photographs were taken. Nothing of importance could be elicited about the family history. The history of the growth is interesting. When the patient was 3 years old she had "whooping-cough." The whooping-cough was followed by an abscess which was opened and healed up, leaving a small tumour about the size of a pea. By the time the child was about 8 years old this small tumour had grown and was about the size of an egg, and she was taken to the Great Ormond Street Hospital, but nothing was done. When the patient was 12 a growth had commenced on the other side of the neck and she was taken to the late Sir Morell Mackenzie. His treatment, whatever it was, was not persevered with, and at the age of 14 the patient was taken to the Golden Square Hospital. According to the patient Sir Morell Mackenzie's treatment consisted in (1) "making a hole and putting in a tube which was left in nine months;" (2) burning with caustic; (3) putting a cord around the tumour subcutaneously which was tightened every day. The treatment being abandoned nothing had been done since. The patient is bright and cheerful and shows no signs of mental weakness.

CASE II.—This case, a girl aged 13, is chiefly remarkable as showing the improvement under thyroid extract. My notes are best exhibited in a tabular form thus:

Date.	Size of Neck.	Temperature.	Weight.
	Inches.		st. lb.
April 17	15½	—	—
April 24	1½	—	—
May 1	1½	—	5 5½
June 5	12	—	—
July 3	11½	—	—
July 14	12	99° F.	—
July 25	12	99° F.	5 4½
August 9	11½	99° F.	5 7
August 12	12½	98° 4' F.	5 9½
August 23	11½	98° 4' F.	5 8½
October	12	99° F.	5 8

Fig. 1.—E. G., aged 38; showing a goitre of thirty-four years' growth.

Fig. 2.—E. G., aged 38; showing a goitre of thirty-four years' growth.

▼ CASE III.—A girl, aged 18, was born at Pentreuchaf, near Pwllheli. Her uncle and aunt died of consumption. There was no family history of goitre. When the patient came to me she complained of pain in the region of the heart's apex. There was a well-marked systolic murmur in the right supraclavicular region and a well-marked goitre measuring 12½ in. The temperature was 98.8° F., the pulse 120. Thyroid gland, gr. 1½ night and morning, was exhibited, and the following table shows the results.

Date.	Size of Neck.	Temperature.	Pulse.
	Inches.		
July 21	12½	98.8°	120
August 7	12	99.0°	120
September 18	11½	98.4°	100