neurotomy upon the posterior branches of the plantar nerves, repeated at intervals of at least fifteen days, in order to remove the lameness wholly, without entirely depriving the foot of the sensibility of feeling."

J. P.

Bacterienkunde und Pathologische Mikroskopie für Thierärzte und Studierende der Thiermedizin. Von Th. Kitt. Zweite Auflage. Moritz Perles: Wien, 1893.

THE second edition of Professor Kitt's excellent *Manual of Bacteriology and Pathological Microscopy* is, as was to be expected, a bulkier volume than its predecessor. The plan of the book remains the same, but the text has grown from 328 to 450 pages. The expansion is mainly in the section dealing with the different pathogenic bacteria of the domesticated animals; the new matter dealing with tetanus, diphtheritic affections, meat-poisoning, and other micro-parasitic diseases whose etiology has been worked out since the first appearance of the work. The illustrations have been increased in number, and also improved in quality, by substituting clear wood-cuts of drawings made by the author for some of the very imperfect reproductions of micro-photographs that appeared in the first edition.

We warmly commended the book on its first appearance, and, by way of concluding this notice of the second edition, we can only say that the new matter, like the old, is concise and lucid, and that the work is the best guide that we are acquainted with to the practical study of Veterinary Pathology.

CLINICAL ARTICLES.

THE CLINICAL HISTORY OF AN OBSCURE CASE.

By R. HUGHES, F.R.C.V.S., Oswestry.

ON 5th September 1892 I was requested to see a valuable hunter belonging to a Master of Hounds in this neighbourhood. The horse was a powerful and promising weight-carrier, rising 5 years old, about 16·2 hands high, bred by the owner, and had taken prizes at several shows as a one, two, and three year old hunting colt. He was taken up early in August to prepare for the season's work, but on the above date was found to be covered with eruptions. I found it a typical case of "urticaria," the eruption showing itself on the face, neck, inside of fore and hind legs, the breast and belly, but with only slight constitutional disturbance. With a change of diet and the usual treatment he got nearly all right, but on resuming work and having his usual food it reappeared on the 29th, with slight swellings underneath his chest and belly, and on the inside of the shaft of the left tibia, the latter swelling being very sore to the touch, and a considerable amount of lameness being manifested on moving the horse in his box. There was but little constitutional disturbance even at this stage, viz., pulse 56, temperature $102\frac{3}{8}^{\circ}$, respiration normal.

In about a fortnight the diffuse swelling on the thigh subsided, and a distinct bony enlargement was left, with no soreness on manipulation;

in every respect the process seemed to simulate the formation of a large "splint."

From time to time these circumscribed patches of acute periostitis appeared suddenly, always associated with great soreness to the touch and a certain amount of lameness.

These successively appeared on the inside of both tibias, and in front, and inside of both metacarpal and metatarsal bones. The os calcis assumed large dimensions, and an eruption appeared on the skin over it, and also on both fore pasterns. I may here mention that his hock was fired and blistered for a "curb" about eighteen months previously. There was no œdema of the legs, which were constantly bandaged, except where the patches of periostitis occurred. The œdema underneath the chest became gradually indurated, but pitted on pressure under the belly, and ultimately there was desquamation of the cuticle in both situations, and in small patches on the neck and behind the off hock.

During these changes there was not much constitutional disturbance, temperature varying from 100° to 103° F., pulse 44 to 60 (until after about 6 or 7 weeks, when it became quicker at times), respiration normal, visible mucous membranes always natural, heart sounds also normal. At no time was there any interference with respiration, except that during the last month the horse became a confirmed grunter on the slightest excitement in the box. There was natural action of the bowels, and the fæces were normal throughout; the urine also appeared normal, but none could be collected for testing, as the horse was a very nervous animal.

I could not detect any indication of organic disease about the horse, and I never saw a case like it before, nor can I find anything approaching it in our literature. When the multiple exostoses appeared the nearest approach to the disease that I could think of was "syphilis" in man.

This state of things went on without any improvement for fully two months, and the horse was gradually losing flesh, although he received the best attention and his appetite was good throughout. As I held an unfavourable opinion of the case my client got tired of continuing further treatment, and the horse was left for quite a fortnight with only ordinary attention as to diet, when he rapidly became much emaciated.

Considering the case one of unusual interest, I sent the horse to the Royal Veterinary College, where he was killed on the 1st February last.

Professor M'Fadyean has sent me the *post-mortem* notes given below.

The treatment tried consisted in aperients, salines, and absorbents at the commencement, then alteratives and tonics, as well as sedative and refrigerant applications externally. Liq. arsenicalis and acid nitro-hydro-chlor. in full doses daily seemed to have the best effect, but neither medicines nor the best of attention and a carefully regulated diet in the shape of good old hay, oats, malt, bran, and a few carrots, were productive of much good.

Post-mortem.—The skin of the abdomen, commencing in front of the prepuce and extending forwards in the form of a patch of about 18 inches by 10 inches, is diseased; the normal brown hairs are lost and those present are fine pale and short; they are embedded in a

grayish granular greasy material, or scurf. Upon making an incision a quantity of yellow serous fluid escaped from the subcutaneous tissue. The latter, over the diseased skin, is thickened to the extent of an inch or more. Its texture is that of dense but succulent-looking white fibrous tissue, which has also partly invaded the substance of the abdominal muscles. There is a similar disease of the skin and subcutaneous tissue under the sternum, mostly on the left side, and on the outer side of the off hock.

On the double colon there are a few shreds of fibrous new formation, and in the peritoneal cavity a small quantity of straw-coloured fluid.

The intestines appear to be normal.

The mesenteric lymphatic glands are enlarged, several of them being about the size of a turkey's egg; they are abnormally firm and pale, but on section there is no other evidence of disease. The lymphatic glands of the large intestine appear to be normal.

The spleen weighs 4 lbs. and is very firm; the Malpighian bodies are unusually large and distinct; the capsule and the lymphatic glands of the spleen appear to be normal.

The liver weighs 13 lbs. 1 oz. The capsule over the anterior surface is pitted in a peculiar manner; each pit might hold a barley grain; at six places the capsule is studded with a fibrous thickening which on section is found extending as nodules into the substance; there is an abnormal development of fibrous tissue both on and below the surface of the capsule. A few small whitish nodules are also present in the liver substance, away from the capsule.

The hepatic lymphatic glands are indurated but not enlarged.

The kidneys appear normal, the right one weighing 1 lb. 14 oz. and the left one 2 lbs.

The superficial inguinal lymphatic glands are enlarged, a group on each side being about the size of the fist.

The prescapular lymphatic glands appear to be normal.

The prepectoral lymphatic glands are enlarged.

The right lung is emphysematous but otherwise normal.

The left lung is in the same condition as the right.

The bronchial lymphatic glands are slightly indurated but not enlarged.

The pericardial sac contains a few ounces of straw-coloured fluid.

The heart weighs 9 lbs. 6 oz., and all the valves appear to be normal except the aortic, which shows some fenestration close to the free edge of the cusps.

The submaxillary lymphatic glands are normal.

The deep inguinal lymphatic glands are normal.

The bones of the limbs when cleaned showed at numerous places evidence of periostitis in the shape of patches of new bone. These patches were composed of porous-looking osseous tissue, generally smooth on the surface, but at some places jagged or spicular. The principal seats of this new bone in the hind limb were: the inner surface of the tibia, the outer surface of the tuber calcis, the anterior and inner surfaces of the large metatarsal bone, the first phalanx (irregularly distributed), and the anterior surface of the second phalanx. In the fore limb the bones similarly affected were the lower end of the radius (slight), the large metacarpal bones (chiefly in front

FIG. 1.—TYMPANITES OF GUTTURAL POUCH.

FIG. 2.—LIPOMA OF DOG'S NECK.

FIG. 3.—PAPILLOMA OF COW'S ESOPHAGUS.

of their lower extremities and along the line of junction with the inner splint bone), and the first and second phalanges.

Neither tubercle bacilli nor any other organism could be discovered in the enlarged lymphatic glands, nor in the subcutaneous or liver lesions. The liver nodules were found to be composed of small round cells.

A CASE OF TYMPANITES OF THE GUTTURAL POUCH.

By J. M'FADYEAN, M.B., B.SC., Royal Veterinary College, London.

IN the month of January last, through the kindness of Mr Hewson of Royston, I had the opportunity of seeing for the first time a case of so-called tympanites of the guttural pouch—an abnormality which appears to be of rare occurrence. I do not know of any reference to the condition in English veterinary literature, but about a page and a half is devoted to it in the German text-book of *Veterinary Surgery* by Professor Möller of Berlin. According to that author, attention was first called to the disease by the French veterinary surgeons, Vatel and Gohier, and since then a considerable number of cases have been observed and described.

The abnormality consists in a condition of chronic over-distension of one or both guttural pouches with air. The distension is generally met with in foals, in which it sets in shortly after birth. Möller says that two different conditions have been described under this name, viz. (1) over-distension of the pouch with atmospheric air admitted through the Eustachian tube, and (2) over-distension with gas evolved in the pouch under the influence of catarrh of the lining mucous membrane. Möller regards it as probable that in cases of the first kind the air is admitted from the pharynx by the Eustachian orifice during the act of deglutition, the orifice, owing to some deformity of the tube, acting after the manner of a valve, and preventing the egress of the air. Other reasons assigned for the abnormality are paralysis of the levator palati, and unusual shortness of the soft palate, with consequent failure to cover the Eustachian orifices during deglutition.

The subject of the present note was a thoroughbred yearling filly, which Mr Hewson was good enough to send to the college. The swelling in the region of the throat was, I understand, observed soon after birth, and the distended pouch had been several times punctured by Mr Hewson. On each occasion a quantity of air escaped, and the swelling disappeared. The improvement, however, was only temporary, as the air soon reaccumulated.

The condition of the filly when it first came under my observation is well represented in Fig. 1, Plate VII., which reproduces a photograph by Mr Coghill. The circumference of the neck, measured over the most prominent part of the distension, was 32 inches, of which 18½ inches belonged to the right side. Anteriorly the swelling was exactly limited by the edge of the ramus. Its posterior limit was over the jugular furrow, and 11 inches distant from the root of the ear. Superiorly it reached the wing of the atlas, and extended forwards and upwards between the root of the ear and the articulation of the jaw.