into his mouth, some of which he swallowed and some he rejected. In about an hour after arriving home the tongue became very red and swollen, the sides and tip covered with red spots, and the whole very painful to the touch. There was profuse salivation and a swelling in the submaxillary space, the animal only being able to swallow with extreme difficulty.

6. P.M. An aperient pill was administered and an aqueous solution of alum applied at frequent intervals to the tongue.

9. P.M. Respiration was laboured and the breathing very noisy, denoting approaching asphyxia.

Scarified the under surface of the tongue longitudinally with a lancet in four places; this caused about 2 oz. of hæmorrhage.

7th March. Very perceptible improvement, but still salivating freely. Applied the alum lotion frequently during the day. The respiration was not at all noisy, and during the evening the animal took a little bread and milk.

8th March. Much less salivation but still dull. Ate a little food.

9th March. Quite bright and lively; drank milk readily. From this time the improvement was maintained, and on the 11th he was sent home, the tongue being normal in size again.

PERFORATION OF WALL OF STOMACH OF DOG AND RECOVERY.

THE following case is one of some interest, and somewhat similar in character to the two cases which have been recently reported in the *Veterinary Record*.

During the early part of March a mongrel fox terrier was brought to the Free Clinique suffering from a fluctuating swelling on the left side, extending over the fore ribs. Mr Dennington, who examined the patient, diagnosed an abscess. Hot fomentations were ordered and continued for four days; the abscess was lanced, and on further examination, a sharp foreign body was felt protruding between the eleventh and twelfth ribs. Upon being removed this proved to be a wooden meat skewer $5\frac{3}{4}$ inches long, such as is generally used for passing through the pieces of horse flesh known in London as "cat's meat." The wound was treated antiseptically and the animal made a rapid recovery.

Throughout the whole progress of the case the appetite never failed, and the dog appeared to suffer no inconvenience whatever.

Further inquiry revealed that it was the habit of the owner to throw the meat to the animal fixed on the skewer, just as it was received from the cat's meat vendor.

TWO CASES OF MAMMARY ADENOMA IN THE BITCH WITH METASTASIS TO THE LUNGS.

By STEWART STOCKMAN, Professor of Pathology, Dick College,
Edinburgh.

THE adenoma is the malignant neoplasm which is most commonly met with in the bitch, and in my experience the primary growth is most frequently located in the mammary gland. As the two cases

about to be described are of both clinical and pathological interest, I may relate the short history supplied to me in each case.

CASE I.—Collie bitch, had a tumour about the size of a pigeon's egg in the mammary gland; removal was not attempted. The patient had been ailing for a week or so, but symptoms of dyspnœa only appeared two or three days before death; it was not until the day before the end that they became distressing. This history is meagre, but not without interest, as will be seen. On *post-mortem* the lungs were found in the condition portrayed in fig. 5, Plate IV.

Both lungs were enlarged and did not collapse. The surface of the visceral pleura was raised by a multitude of small greyish nodules varying in size from a pea to a hazel nut.

On section, these same nodules were seen throughout the lung substance, separated by a very small but variable amount of lung tissue. Their consistence was that of a hepatised area in the horse; the invaded parts were airless and contained no softened centres. The bronchial glands were enlarged and firmer than normal; some of them contained black pigmented centres (carbon).

CASE II.—Setter bitch, with tumour about size of fist in right mamma, which was excised by my colleague Professor Dewar. The patient remained dull after operation, but no definite symptoms appeared until the tenth day, when the temperature rose to 105° , and the respiration became slightly hurried. From this time on the temperature rose to 106° , the symptoms of dyspnœa became more intense, and on the fourteenth day the patient died. The microscopic appearance of the lungs of this animal was practically the same as in Case I. The nodules, however, were hardly so numerous, nor were they as firm; their consistence was that of a normal testicle.

The microscopical picture was the same in both cases. They are suggestive of what may follow from an infecting agent being arrested in the pulmonary capillaries. At various points the spongy tissue is obliterated by very dense collections of oval-shaped cells resembling certain forms of glandular epithelium, but only in a few cases is there an acinal arrangement. Each cellular area is surrounded by a limiting membrane, which is not of the same breadth in every case. In some cases this membrane is the alveolar wall, in others it is the interlobular septum; in the latter case the interfibrous spaces are invaded and the fibrous tissue cells are proliferating. The majority of the cells have a diameter of $5\ \mu$; a few are somewhat larger. That they are in a very active state of division may be gathered from the fragmented state of their nuclei. In the more open parts the alveolar walls are thickened, and their cavities contain a few catarrhal cells. The new formations in the bronchial glands are identical in structure with those of the lung.

The two cases just described show in how astonishingly short a space of time these metastatic adenomata may develop; they give one some idea of when to expect the symptoms of secondary formations after operation, or, to put it in other words, at what date after operation one may venture on a favourable prognosis, for in Case II. there is reason to suppose that the infecting agent entered the blood-stream after the veins of the mammary tumour had been severed for its removal. In both cases it will be seen that the symptoms of dyspnœa were not noticeable until a few days before death; in Case II. on the tenth day after that

on which we might assume the infecting agent to have gained the venous stream. During this incubation period of ten days, then, the new cells were actively dividing and obliterating the lung tissue, which on the fourteenth day was so far destroyed as to render life impossible. Further, since the primary neoplasm was in the mammary gland and the secondary ones in the lungs and bronchial glands, we may conclude that the infecting agent, whatever it may be, travels both by the venous and lymph stream, as in the case of some micro-organisms—for example the tubercle bacillus.

SUPERNUMERARY DIGIT IN THE HORSE.

By THOMAS B. GOODALL, F.R.C.V.S., Christchurch, Hants.

SUBJECT.—A roan colt, four months old. Sire, a weedy horse of nondescript breed. Dam, a “screw” of an underbred cart-mare, suffering from chronic laminitis.

Two others of the same mare’s progeny turn out the toe of the off fore-foot badly. The colt was always an unhealthy, badly-thriving, weedy thing, not worth an operation, turned this toe out very badly, and was occasionally lame. The supernumerary digit was on the inner side of the off fore-leg, outside and independent of the splint bone, the lower extremity of which pointed forwards, and could be distinguished between the large metacarpal bone and the extra digit.

The skin of the supernumerary digit was continuous with that of the metacarpal as far as the fetlock, where they became distinct, the first phalanx of the former being directed across the back of the leg just above the fetlock joint, where the toe and sole of the foot were seen pointing upwards towards the outer side of the leg.

Each joint could be distinguished, and every part of the digit was present, even to the small ergot.

The wall of the foot was abnormally hard, the fibres of the horn having somewhat of a spiral course, and the foot terminated in a point at the toe, like the foot of a fœtus. The cleft and bulbs of the frog were barely distinguishable, but the sole and lacunæ were obliterated.

Dissection showed that this spiral disposition of the horn fibres of the hoof caused the inflections of the “bars” and lateral lacunæ of the frog to extend high into the substance of the foot, as two very hard protuberances.

The right knee, and the leg from the knee to the fetlock, were about one-third as wide again as the same parts on the opposite side; a photograph was taken to show, by comparison, the difference in size, but this, I regret to say, was spoilt.

On removing the skin there is seen to be but one flexor tendon, the perforans, which is an offshoot of the main perforans tendon, in which it becomes fused at the back of the knee-joint.

In the place of the extensor pedis tendon there is a band of fascia extending up the front of the os suffraginis to the fetlock, where it becomes attached to the distal extremity of the splint bone.

The bulk of the superior sesamoidal ligament is made up of muscular fibres. (This fact is of considerable interest.)