

With this explanation of what is expected of the lay meat inspector, we need only add that Professor Ostertag's latest work is certain to prove of great value to the class for which it is intended. It contains a large number of excellent illustrations.

The wall-diagrams by the same author are six in number. The first contains figures of the ox, calf, sheep, and pig, with lines indicating the customary methods of dividing the carcase; the second is devoted to the teeth of the ox, sheep, and pig, as indicative of age; and the remaining four are intended to serve as guides to the position of the various groups of lymphatic glands in the same animals. The cost of the series is 20 mark (£1). Both teachers and students will find them useful.

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## CLINICAL ARTICLES.

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### OBSTRUCTION OF THE COLON DUE TO A CALCULUS.

By G. P. MALE, M.R.C.V.S., House Surgeon, Royal Veterinary College, London.

AN aged cab mare was admitted to the infirmary at 7 A.M., 2nd March, showing symptoms of abdominal pain.

For two days previously no fæces had been passed, and on the preceding evening indications of pain had first been noticed.

There was no history of a previous attack.

After admission she showed dull pain, lying down at intervals; pulse, 60 and full; temperature, 101° F.; respirations, 16; in fact, all the symptoms of impaction of the colon.

On exploration, the rectum was found to be dry and ballooned, and an accumulation of fæces was found in the double colon.

A ball containing carbonate of ammonia and nux vomica was administered, followed by a hypodermic injection of eserine sulphate 1½ grs., and pilocarpine 1½ grs., and frequent enemata.

At 3 P.M. a drench containing 2 ounces of oil of turpentine and 1½ ounces of aromatic spirits of ammonia in a pint of linseed oil was administered.

At 9 P.M., the mare being still in pain, a similar injection of eserine and pilocarpine was given to excite peristalsis.

3rd March. Pain still manifested by turning the head to the flank and lying down. The temperature was now 103° F., respirations, 30, and the mucous membranes much injected.

Eserine and pilocarpine 1½ grs. were again administered, but, having no effect, a 3iv. physic ball was given.

4th March. Still no action of the bowels. The mare was now weaker; the temperature 103° F., pulse 80, fluttering and irregular.

Ammonium carbonate ʒij. and ginger ʒj. were exhibited at intervals during the whole of the three days.

Towards evening a small quantity of liquid fæces were voided, the mare straining somewhat.

5th, 6th, and 7th March. Pain was absent, the bowels acted

freely and at frequent intervals, and towards evening of the 7th chlorodyne 3j. was given.

8th, 9th, and 10th March. Mare looking brighter, feeding a little, and fæces of normal consistence.

11th March. Some indications of pain apparent and off food.

12th March. About midday she again showed pain, with symptoms similar to those of the 2nd inst.

On exploring per rectum the bowels appeared empty as far as the hand could reach.

13th March. The mare was easier and ate a small quantity of food. Towards evening, however, pain was again shown, and this continued, with intervals of ease varying from about 6-15 hours, throughout the next two days. During the whole of this time, *i.e.*, from the 10th to 16th, the action of the bowels continued in abeyance.

Chloral hydrate in 3j. doses was given to relieve the pain.

16th March. To facilitate examination the mare was cast with hobbles, and on exploration per rectum a hard body could be felt with the tips of the fingers, though it was difficult to say whether it was in the large or small colon.

The idea suggested itself that here was an opportunity to attempt the operation of laparotomy.

The owner's consent having been obtained, this was accordingly done on the 17th.

Following the lines laid down by Professor Macqueen in his experimental cases in 1895, the flank was opened on the right side for about eight to ten inches downwards and forwards from a point midway between the angle of the haunch and the last rib. Previous to the operation the horse was cast and chloroformed, the flank carefully shaved and disinfected, and cloths soaked in disinfectant spread on each side of the operation area. Three incisions were made, one through the skin and external oblique muscle, after which the top leg was stretched in a backward direction and fastened there; the second through the internal oblique muscle; and the third through the transversalis; the two latter incisions being in the direction of the muscular fibres, to act as a valve when sutured again. The hæmorrhage having been stopped, the peritoneum was ruptured, the arm introduced, and a large calculus was found far forwards, apparently in the fourth part of the double colon.

This bowel being fixed to the first part of the colon, to the cæcum, and to the abdominal walls, I found it quite impossible without rupturing the bowel walls to bring it within one foot of the flank incision. The muscles were accordingly sutured in layers with thick cat-gut, and the skin brought together with No. 6 Chinese twist, and the mare allowed to rise.

The same evening, for humane and economic reasons, the mare was slaughtered.

A *post-mortem* examination being made, a calculus was found at the end of the double colon, just before it narrows down to form the small colon. The bowels were inflamed at this point, though not very markedly, and contained soft fæces. The calculus was oval in shape, with a corrugated surface; it measured 21 inches in its larger and 16½ inches in its smaller circumference, and weighed 3¾ lbs. It appeared to be composed of compacted dust particles.

The above case shows that although laparo-enterotomy may be successfully performed when the calculus is situated in the small colon, yet it is quite impracticable when the obstruction is in either the fourth or first part of the double colon. It is therefore of great moment to carefully ascertain the exact position of the calculus before advising operation.

### GASTROTOMY IN A DOG.

By PETER WILSON, M.R.C.V.S., Lanark.

*Subject.*—A three-months-old prize-bred fox-terrier puppy.

*History.*—Early in October 1902 the owner spoke to me about it picking up pieces of iron in his forge, and said he thought it had swallowed some of these. I advised him to give it an emetic, to see if it would vomit any. He did so, but with no result. At this time it was eating well.

However, by Saturday, the 25th October, its appetite was so bad that it could scarcely be induced to touch any food, and, on lifting and shaking it gently, the owner heard a sound like that produced by shaking a bag of nails. He brought it in to me that night.

*Symptoms.*—Its general appearance was unthrifty, and it was very thin, but fairly lively.

The previous history led me to examine the region of the stomach. Here one could feel, on palpation, something hard; on auscultation, a sound such as might be produced by a miniature stone-crusher was heard; and, when shaken, a sound of iron rattling was distinctly audible. There being no doubt about the diagnosis, I informed the owner that the only chance of saving the animal's life lay in an operation, and we arranged to perform it next day.

*Operation.*—In the morning I washed him in lysol solution.

When the owner arrived, we shaved the seat of operation, and washed it with chinisol solution, then gave an anæsthetic (æther was principally used, with a little chloroform), scrubbed the part with æther, and again washed with chinisol. The operation was performed according to the directions in Professor Hobday's "Canine Surgery," only in suturing the abdominal wound the peritoneum and muscles were sutured together. Silk was the suture material used for this and the stomach, and aseptic gut was used for the skin. To finish with, a stripe of sublimate wool was placed round the abdomen, and fixed with a bandage. The wound gave no trouble. It healed by primary intention.

*After Treatment.*—The patient was kept for two days and a half on enemata of extract of beef, getting water with a little boric acid to drink. From then till the ninth day it got milk and water and beef tea to drink. Afterwards it got porridge, bread with milk, and raw minced beef. It went home in fourteen days in good health, and has remained so.

*Result of Operation.*—There were removed from the stomach fifty-eight pieces of iron, weighing rather more than a quarter of a pound. They were mostly old shoe nails, with a few old rivets, and several splinters of iron.