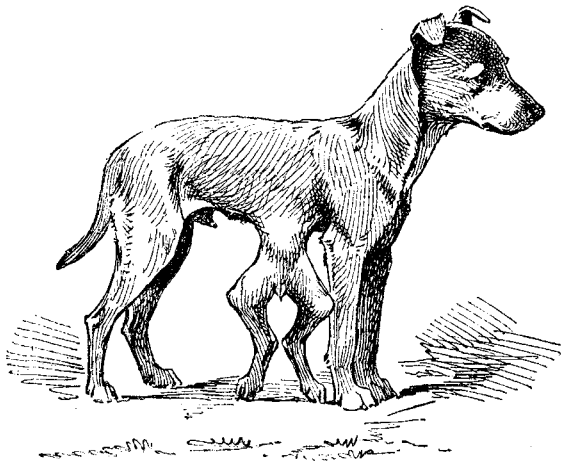


AN INTERESTING MONSTER.

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THROUGH the kindness of Mr. Peter Taylor, of Manchester, I have had an opportunity of examining the anatomy of the interesting case of polymelian canine monstrosity of which the external features were figured and described in THE LANCET of Aug. 28th, 1897. The malformation affects

FIG. 1.



The animal when alive.

the posterior part of the alimentary canal and the genito-urinary organs of the right side.

The alimentary canal is normal to a point 210 mm. from the anus; the small intestine here bifurcates, both divisions having an ileo-cæcal valve at 30 mm. from the point of bifurcation. The large intestine and cæcum of the left side are normal; the large intestine of the right is nearly twice

FIG. 2.

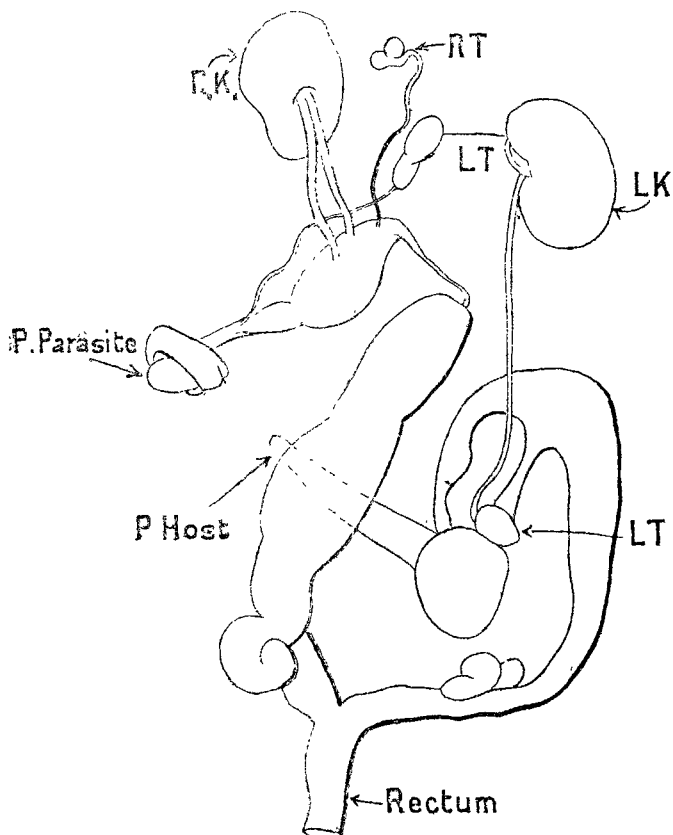


Diagram representing the viscera of the monster. R. K. and L. K., Right and left kidney respectively. R. T. and L. T., Right and left testicle respectively. P. Parasite, Penis of Parasite. P. Host, Penis of Host. One-half natural size.

the diameter of the left and with a cæcum making only one turn; it terminates abruptly in a solid cord 20 mm. long that is continuous with the apex of the bladder of the parasite.

The left kidney is normal in position and with a ureter

opening into the bladder in the usual way. The left testicle was in the canal; its vas deferens was normal. The right kidney is more rounded than the left, its posterior border being on a level with the anterior of the left. It has two ureters 34 mm long that open close together on the right side of the small bladder of the parasite. The right testicle of the parasite is small, its duct opening into the apex of the bladder. The left is of about the same size as the single testicle (left) of the host; its duct opens into the urethra. The penis of the parasite is short and has a distinct urethral opening and os penis. There was no trace of female organs. A large artery that supplies the parasite and sends a small vessel to the right kidney is given off close to the origin of the superior mesenteric.

An ischium and ilium were present on the left side of the parasite with an acetabulum in the usual position, but on the right the ilium is alone present.

THE USE OF HYDROCYANIC ACID AS AN ANTIDOTE TO CHLOROFORM.

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THE extreme frequency with which records of death from the anæsthetic administration of chloroform appear in the professional journals must make welcome the addition of another antidotal agent to the list of those with which we are already acquainted. The idea of using hydrocyanic acid as an antidote to chloroform first suggested itself to me about two years ago when watching the different effects of the two drugs upon the respiratory tract when used to produce death, and particularly from having observed the powerful and rapid excitant result which follows absorption of a toxic dose of the acid. In 1896¹ there was published in detail a list of some forty-three observations upon various animals, including dogs, cats, a horse, sheep, and calf, showing the results obtained by this method of resuscitation and also a few cases illustrating the palliative and sedative effects produced on the respiratory efforts by chloroform inhalations upon animals suffering from overdoses of hydrocyanic acid. Since then I have been able to collect fifteen additional consecutive cases in which it has been successfully used in the College canine clinique after respiration had actually ceased, and I have also had confirmatory reports of its antidotal value from veterinary practitioners in various parts of the country. The results have certainly been in the highest degree satisfactory, so much so that when chloroforming animals the only antidotes we now have at hand ready for use are those of hydrocyanic acid and liquor ammoniæ fortior. As soon as breathing ceases or becomes dangerous artificial respiration is resorted to, the tongue being continuously pulled well forwards in a jerky manner and a full medicinal dose of Scheele's acid placed as rapidly as possible at the back of the throat. When respiration has re-commenced the ammonia vapour is applied cautiously to the nostrils and in the majority of cases a safe termination ensues.

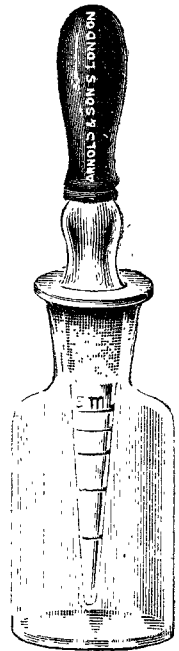
The method of artificial respiration preferred is that of laying the animal in a horizontal position on its right side and pressing the ribs in a short, sharp, jerky manner; we have tried everting the body, but I am convinced that this is a bad method in the dog and cat, as the intestinal organs press upon the diaphragm and limit the capacity of the thorax. We have also tried placing the body in the opposite position with the idea of removing all pressure of the abdominal organs from the thorax and its contents, listening carefully at the same time in each case to the heart sounds with the phonendoscope, but I am firmly convinced that the heart sounds are stronger and less laboured when the body is placed horizontally.

When reasoned out theoretically, in addition to the results of practical work, hydrocyanic acid stands foremost amongst agents likely to prove of antidotal value; for what more

¹ Journal of Comparative Pathology and Therapeutics, June, 1896.

rapid or powerful respiratory stimulant have we? Its use is attended with no more danger than that of strychnia—in fact, in the dog and cat with far less. Its rapidity of action is unquestionable, it is easily absorbed from any of the entrances of the body, and it has the advantage over ammonia that it does not irritate the tissues to which it is directly applied. Besides these things, not only has it an immediate effect in starting the respiratory mechanism, but when once this has commenced the stimulating effect of the acid is maintained for twenty minutes or half an hour and keeps it going until the breathing is able to resume its normal aspect and the patient is out of danger. I am aware that many cases will recover by the aid of artificial respiration alone, but I am perfectly convinced from tests applied to this point, and from an extensive experience of the results we used to obtain with other antidotes before hydrocyanic acid was tried, that the use of the acid gives an enormously higher proportion of successes. When compared with hypodermic injections of strychnine, ether, or saline solution, or the use of amyl nitrite or ammonia vapour, its effect is visibly much more rapid and powerful. Scheele's acid is of course more rapid and powerful than the British Pharmacopœia acid and acts best when given undiluted.

With reference to the method of administration the best way to apply it is undoubtedly by means of a graduated drop-tube on the back of the tongue; several models of this have been made at my request by Messrs. Arnold and Sons, and the illustration shows the one which I am now using. Hypodermic injection does not seem to give such good and rapid results, and the direct forcing of the vapour up the nostrils by means of bellows is decidedly dangerous from the risk of administering an overdose. Full medicinal doses are necessary as when an animal is under chloroform the effect of the acid is not visible quite so quickly as when no chloroform has been used. If an overdose be given the judicious use of the anæsthetic vapour will combat and quiet the spasm of the respiratory muscles until the excess of acid has had time to become eliminated from the system. In several cases we had opportunities to test this before experience taught the exact dose. This latter averages in the dog and cat about one minim of Scheele's acid for every seven or eight pounds of live body weight. The object must be to give just enough acid to produce the preliminary excitant effect upon the respiratory centre and, of course, like all antidotes, the sooner it is administered



Drop-bottle tube.

after dangerous symptoms have appeared the more likely is the result to be favourable.

The last two cases in which the acid was used are fairly typical of the others and illustrate the effect.

CASE 1.—A Scotch terrier, female, six months old, was being operated upon for the reduction of an umbilical hernia. After the animal had been under the influence of chloroform for eighteen minutes respiration suddenly ceased, the heart still continuing to beat. The restraint of the operating table was at once removed and the animal placed in a horizontal position, lying on the right side. One minute after respiration had ceased three minims of Scheele's acid were administered on the back of the tongue, the latter organ being drawn well forward in a jerky manner, and artificial respiration started. Respirations did not recommence until two and a half minutes later, but they speedily became strong in character, and four minutes after this the patient was quite out of danger.

CASE 2.—In a mongrel beagle, female, about nine months old, respiration ceased suddenly (10.49 A.M.) Whilst the restraint of the operating table was being removed the breathing re-commenced (10.50 A.M.). Thinking that the animal was recovering no further antidotal measures were then taken, but at 10.51 A.M. the respirations became faint and again ceased. Fifteen seconds later four minims of hydrocyanic acid (Scheele) were placed on the back of the tongue and artificial respiration was applied. Twenty-five seconds after this the respirations re-commenced and this time they were maintained, speedily becoming strong and the patient making a good recovery.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CONGENITAL ABSENCE OF THE RIGHT EYE AND FISSURE OF THE NOSE.

BY W. G. NASH, F.R.C.S. ENG.

THE accompanying illustration is reproduced from a photograph of a child, aged six months, who was born without the right eye and with a fissure of the right side of the nose. On examination the right palpebral fissure was seen to be small and on raising the upper lid the socket looked very much like that seen after removal of the eye except that a small pigmented body about the size of a pea occupied the centre of the cavity. This is the eye the development of which was arrested at a very early stage. The right side of the nose is fissured up to the lower edge of the nasal bone. The right nasal bone is slightly separated from its fellow and causes a slight flattening of the bridge of the nose. Near the tip of the nose is a small projecting nodule very much like the small supernumerary auricles so commonly seen.

As to the cause of this deformity the growth of the eye appears to have become arrested at a very early stage of development and at the same time the external nasal process failed to unite with the fronto-nasal process. The mother



attributes the deformity to the fact that she was frightened by a strange dog jumping on to her bed when she was three months pregnant.

Both these deformities I believe are very rare. Mr. Cantlie¹ has figured a Chinaman with congenital absence of an eye and ear, and there has also been figured² a child with double hare-lip and fissure of both sides of the nose. I have a photograph of a dead full-term foetus with a single hare-lip, cleft palate and fissure on the same side between the nose and the cheek extending as high as the inner angle of the orbit, absence of eyelids and apparent defect of development of the corresponding half of the skull. Mr. R. H. Lucy, of Plymouth, in August, 1890, had under his care a child, aged two months, with a congenital cleft-

¹ Brit. Med. Jour., 1891, vol. i., p. 1223.

² Annals of Surgery, vol. xxiv., p. 210.