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Purpura Hemorrhagica of the Horse.

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masses had evidently caused paralysis or atony of the muscular wall, resulting in the diverticulum.

The owner was notified that surgical treatment would inevitably be unsuccessful and permission to destroy the patient was obtained. Euthanasia was performed by means of nembutal administered intravenously. The accompanying photographs illustrate the post mortem findings.

Virgil Reinhart, '44

**Purpura Hemorrhagica of the Horse.** Purpura hemorrhagica of the horse is an acute, non-contagious disease probably arising from septic bacterial intoxication. It is characterized by extensive edematous swellings of the subcutaneous tissue and petechiae on the mucous membranes and internal organs. The disease usually occurs sporadically. It develops usually as a secondary infection in connection with diseases in which suppuration or necrosis occur in some part of the body. The exact etiologic agent is unknown although several theories have been advanced. One theory is that injury to the walls of the blood vessels is caused by a toxin circulating in the blood which reduces their elasticity and power of resistance. Another explanation is that a primary change in the blood impairs the nutrition of the vascular walls and causes a watery consistency of the blood. The possibility of anaphylactic origin cannot be disregarded as shown in experiments by Marek. Hutrya and Marek state that the condition follows cases of fistula of the withers and poll evil. In fifteen years experience at Iowa State College where these conditions are very common, there has never been complication with purpura unless secondary influenza was also present. A great percentage of the cases of purpura have followed influenza at the Iowa State College Clinic. The disease is most common in spring and early summer. Horses under two years old are seldom affected.

A seven-year-old black Percheron mare was presented at the Stange Memorial Clinic on April 15, 1943. The history given included an abortion a month previously, followed by an attack of influenza a few days later. Swellings had been observed on the animal's body for a week prior to its hospitalization. The temperature was 102.8°F., the pulse rate 78 per minute, and respirations 40 per minute. The nose and lips of the patient were swollen to such an extent that prehension was impaired and the nasal mucosa could not be examined through the external nares. Interference in locomotion was present because of the swellings of the extremities. Urticaria-like swellings were seen on the lower abdomen and the chest was swollen. The skin over the swellings was tense and the surface could be pitted only with difficulty. A yellowish serous fluid was exuding from the swellings on the hind legs and drying in crusts in the hair. The condition was diagnosed as purpura hemorrhagica.

Treatment consisted of transfusions of citrated equine blood intravenously at the rate of 250 cc. per day for 5 days followed by 150 cc. per day for 4 days. A solution of glycerine and iodine, equal parts, was used on the affected areas of the hind legs.

Signs of improvement were noted during the first four days. The pulse rate
decreased to about normal, the temperature did not rise, the swellings over the body and face had decreased, and the serum exudate was much less in quantity.

This improvement was followed by a sudden exacerbation in which the temperature rose to 104.7° F. and the pulse rate rose to 84 per minute. Sulfanilamide powder and antibacterial equine serum were administered, the former being continued for a number of days. The temperature and pulse slowly dropped to about normal in the next 4 days. At this time the skin in the areas of exudation began to slough. The transusions which were discontinued for 5 days were resumed. The pulse and temperature again rose to 88 per minute and 104° F. on the twelfth day and remained high for 4 days. The skin continued to necrose and was cut away to prevent intoxication by absorption from developing gangrenous processes. There was no improvement following this relapse and the mare's condition rapidly became worse. Necrosis of the areas on the hind legs continued and further skin necrosis involved swellings which appeared on the ventral aspect of the neck. On the fifteenth day of hospitalization, the patient went down and died the following night.

The autopsy revealed petechiae in the lungs, trachea, epicardium, and kidneys. Myocardial, hepatic and renal cloudy swelling, and fatty degeneration were observed. A catarrhal metritis was found as was a hypostatic pneumonia of the right lung.

REFERENCE

Cystic Calculi in a Bitch. A case of recurrent cystic calculi was brought to the Stange Memorial Clinic on July 19, 1943. The patient, a 9-year-old female Scottish Terrier, had 53 small bladder stones removed surgically at the clinic 3 years prior to her readmittance. Diagnosis of the condition was made from the history of previous lithiasis, frequent micturition with hematuria, and by abdominal palpation.

Surgical treatment was again indicated and on July 20 the dog was prepared for the operation. The bitch was given ¾ gr. of morphine and 1/100 gr. of atropine as a basal narcotic. The operative area was shaved, cleaned with ether, and sprayed with 70 percent alcohol. Merthiolate ophthalmic ointment (1:5000) was applied to the eyes and surgical anesthesia was produced with ether. A 2 inch median incision through the skin, muscle, and peritoneum was made beginning 1½ inches posterior to the umbilicus. The bladder was drawn through the incision and sterile gauze sponges were placed about the organ to prevent urine from entering the abdominal cavity when the bladder was incised. A 1½ inch longitudinal incision was made in the ventral bladder wall through which a large, smooth calculus was extruded by manipulation. Three smaller calculi were removed with a forceps. The largest concretion was 1½ inches in diameter and weighed 1¾ ounces. The bladder incision was closed with a Connell suture using No. 2 catgut. The bladder was replaced and the peritoneum drawn together with No. 2 catgut using a continuous suture. The incision through the skin was closed with 4 interrupted sutures of No. 6 nylon and apposition sutures of No. 2 catgut were placed in the skin edges. A sterile duopack was placed over the wound and the edges affixed with collodion adhesive. A roller bandage was applied to prevent hemorrhage and provide support for the affected parts.

The dog made a rapid post-operative recovery. The roller bandage was removed the day following the operation. The duopack came off without assistance and on July 24, two cutaneous sutures were removed. The two remaining sutures were removed two days later. After removal of the duopack, the wound area was cleaned daily with 70 percent alcohol until the patient was discharged July 29.

The reader is referred to the article,