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Ventral Abdominal Hernia with *Corynebacterium Pyogenes* Infection

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throughout the progress of the case was extremely unfavorable as to the future usefulness of the animal. Instructions given at the time of discharge were to give the horse box-stall rest for 2 weeks, to be followed by gradual walking before giving the horse his freedom in an exercise yard.

The thwarting of infection during the period immediately following the injury was attributed to the large doses of penicillin given. In the 7 days of penicillin therapy, 6,200,000 O. U. of penicillin in saline was administered systemically. During that period a total of 600,000 O. U. of penicillin in saline was injected into the joint capsule. The final closure of the joint capsule was credited to the combination of urea, sulfathiazole, sulfanilamide, and boric acid-air slaked lime therapy.

The economic value of the horse did not merit the treatment followed and destruction of the animal would have ordinarily been indicated. However, because of the faithfulness of the horse at times when his master's life was endangered during contest rodeos, the sentimental value placed thereon was extremely high.

—A. Neumann, '49
—Art Skewes, '49

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Ventral Abdominal Hernia with *Corynebacterium Pyogenes* Infection.

A 6 year old Brown Swiss cow was admitted to Stange Memorial Clinic Dec. 29, 1947, with a history of being injured in the left flank while attempting to jump a fence. The left flank was extended anteriorly, laterally, and elevated dorsally. The enlarged flank indicated a herniation of abdominal viscera or an accumulation of exudate in the subcutaneous tissues. It was impossible to make a positive diagnosis so the cow was taken off feed for 2 days to facilitate a more accurate examination, and to prepare the patient for surgery if necessary. Examination was completed and the diagnosis of ventral abdominal hernia was made. Reduction by surgical methods was selected as the course of treatment.

The day after the diagnosis was made the cow was given 400 cc of Mullenbruck's solution (double strength) intravenously, and restrained on her back. The left ventral abdominal wall was shaved, defatted with ether, and painted with 7 percent tincture of iodine. An 8 in. longitudinal incision was made in the skin along the site of the hernia. Through the incision, a large rent was seen in the abdominal musculature and fascia. Several feet of intestine and most of the cecum were protruding.

The intestines and cecum were replaced. The innermost tear, a longitudinal separation in the rectus abdominis muscle and peritoneum was closed by means of a simple continuous suture of No. 5 chromic catgut, and reinforced by an interrupted mattress suture. The obliquus abdominis internus muscle was sutured in the same manner. A third layer, the obliquus abdominis externus muscle, was closed similarly. There was a rent in the cutaneous muscle but the lateral edge of it had slipped too far to be reached. The medial edge was sutured down with the obliquus abdominis externus muscle. A second small tear in the fascia and obliquus abdominis externus muscle was discovered. It was about 10 in. dorsal and lateral to the primary rent. It was brought into apposition in the same manner as the larger tear.

A 4 ft. sterile gauze pack was placed beneath the skin to induce connective tissue proliferation which would later give additional support to the weakened musculature. The skin incision was closed with a row of Stewart-type sutures. A canvas truss was applied to the patient for extra support.

The cow was given 1,920 gr. of sulfanilamide orally in 2 doses following surgery. This was reduced to 960 gr., given in 2 doses daily, for the following 4 days. Drainage had to be re-established each day.

Two days after the operation the gauze packs were removed. The area was anesthetized with ethyl chloride and the skin brought into apposition with wire clamps. Three of the most anterior sutures were removed to permit drainage.

Six days after the operation, the area showed much swelling and inflammation. The line of incision was washed with chlorine solution, 200 p.p.m. A new area of drainage was established anterior to the original skin incision. About 1 gal. of hemorrhagic exudate escaped. A sample of this was cultured and found to contain *Corynebacterium pyogenes*. It was noticed that the hernial wounds were healing satisfactorily. At this time the pre-femoral lymph node was much enlarged.

A total of 1,300,000 O.U. of penicillin in oil and wax were given intramuscularly for 2 days immediately following the sulfonamide therapy. Potassium permanganate solution, 1:3,000, was used to irrigate the area of infection.

Sulfathiazole was given after the 2 days of penicillin treatment. An initial dose of 1,275 gr. was given in two doses. This was reduced to 825 gr. in two doses for 3 days. The wound was cleaned several times with .5 percent creolin.

When sulfathiazole therapy was discontinued, the wound was still cleansed daily with potassium permanganate solution. At first much caseous exudate was washed out.

The cow maintained a good appetite throughout the course of treatment with the exception of several days following the operation when she ate with less vigor. The highest temperature recorded was 102.8°F., which occurred during the time the excess accumulation of hemorrhagic exudate was present.

The cow was discharged Jan. 19, 1948, as the infection was slowly subsiding. A guarded prognosis was given the owner in view of the difficulty in controlling *Corynebacterium pyogenes* with present therapeutic agents.

—Paul A. Pinkert, '49

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An Extended Case of Cryptorchidism in a Horse. April 13, 1945, a spotted Morocco stallion, age 3 years, was presented at the Stange Memorial Clinic for castration. The right tes-

ticle was found to be in the normal position, but the left testicle could not be palpated in the scrotum. A diagnosis of cryptorchidism was made and the animal was operated on accordingly. At the time of the operation, a mass of scar tissue and the absence of a pronounced testicle in the abdominal cavity indicated that the area had been previously entered. The right testicle was removed however, and the animal was discharged May 6, 1945.

May 26, 1947, the same horse was again admitted to the clinic by a different owner with a typical cryptorchid history. He manifested periods of violence and sexual excitement and had mounted and entered a mare 2 months before. A diagnosis of hypertrophy of testicular tissue was made. Upon casting and entering the abdominal cavity, no definite testicular tissue could be found but the remaining stump of the spermatic cord was removed. The operative site was sprinkled with sulfanilamide and a sterile gauze pack was sutured in the cavity. The pack was removed in 2 days and 400,000 O. U. of penicillin in saline was administered intramuscularly daily in 4 doses. This penicillin therapy was continued until June 6. The horse made a normal recovery and was discharged June 16, 1947.

Oct. 26, 1947, the same horse was again presented at Stange Memorial Clinic with the history that the operation had apparently been successful as no further indications of sexual excitement had been observed. However, a unilateral hernia about 12.5 cm. in diameter had developed in the left inguinal region.

The horse was placed in the stocks and given 60 Gm. of chloral hydrate orally via a stomach tube. He was then cast and placed on his back. The operative area was shaved, defatted with ether, and painted with 7 percent tincture of iodine. Sterile shrouds were placed around the area. The site of operation was infiltrated with 2 percent procaine in saline, and an elliptical incision was made through the skin over the enlargement. Upon entering the hernial sac, extensive adhesions were palpated and the tissues surrounding the contents, as well as the contents them-