


1948

Sulfa-Penicillin Therapy in an Open Joint

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Recommended Citation

Neumann, A. and Skewes, Art (1948) "Sulfa-Penicillin Therapy in an Open Joint," *Iowa State University Veterinarian*: Vol. 10 : Iss. 2 , Article 11.

Available at: http://lib.dr.iastate.edu/iowastate_veterinarian/vol10/iss2/11

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3**Sulfa-Penicillin Therapy in an Open Joint.**

July 2, 1947, a black Quarter Horse gelding, age 6 years, was presented at the Stange Memorial Clinic with a scar formation on the dorsal surface of the right rear metatarsus. The owner suspected a sequestrum or a foreign body in this region, but an X-ray of the area revealed a chronic osteitis of the third metatarsal bone. A considerable amount of scar tissue was present on the skin over this area. No lameness was observed and there was no history of a previous lameness. The owner was advised that any treatment would be likely to excite the condition. Being a roping and bulldogging horse, the blemish was not detrimental to the value of the animal. The patient was discharged the same day.

July 27, 1947, the gelding was again presented at the clinic with a rupture of the soft tissues and joint capsule over the fetlock articulation. The following history was obtained. After the X-ray diagnosis of July 2, the owner placed a severe blister over the scarred area. The blister was then sealed with pine tar and the horse was carried along with the rodeo to be used as soon as the blister had subsided. The tissues in the area of the blister and down to the ankle joint became severely swollen, greatly distended, and friable. On the morning of July 27, the horse was turned out to exercise in the corral and after loping to the far end of the enclosure, he stopped, turned sharply, and suddenly went lame. The swollen and friable tissues over the fetlock had spontaneously ruptured when the strain of exercise and joint action was placed upon them.

The wound was immediately cleansed with 3 percent Therapogen solution and bandaged with a 1:1000 bichloride of mercury pack. 1,500 units of tetanus antitoxin was administered subcutaneously in the neck and 600,000 O.U. of penicillin in saline was administered intramuscularly in the gluteal region. 200,000 O.U. of penicillin was administered intramuscularly in the gluteal muscles every 6 hours for the rest of the day. The following day the band-

age was removed and 100,000 O. U. of penicillin in 10 cc of saline was injected into the joint cavity. The wound was rebandaged with a 1:1000 bichloride of mercury pack. 800,000 O. U. of penicillin was administered intramuscularly in 4 doses during the remainder of the day.

This treatment was continued until Aug. 3, at which time the bichloride of mercury pack and the penicillin injections into the joint cavity were discontinued in favor of a sulfanilamide pack. The intramuscular injections of penicillin were also discontinued and a No. 11 capsule of sulfanilamide was administered orally 3 times each day. This therapy was continued until Aug. 16.

The wound was dressed with a pack consisting of urea 83 percent, sulfathiazole 2½ percent, and sulfanilamide 13½ percent, mixed as a paste in mineral oil. This treatment was aimed directly at the closing of the joint capsule, as at this time the granulations around the wound had closed it with the exception of a fistulous tract from the joint cavity.

During the course of treatment, the horse lost approximately 150 lbs. in weight, but he continued to eat well. No rise in temperature or pulse rate was noted at any time.

After 2 weeks of the urea, sulfathiazole, and sulfanilamide therapy, a slight irritation was noted at the wound edges and a pack of boric acid and air slaked lime was applied daily for 3 days, after which the former treatment was again undertaken until Oct. 6. At this time, the wound was almost completely closed and the secretion of synovia had almost stopped. Boric acid-air slaked lime packs were applied every other day until the horse was discharged Nov. 11, 1947.

At the date of discharge, the horse showed some indications of favoring the right rear leg, but was not acutely lame. The wound was closed and somewhat tender. A slight swelling was observed in the region, which will probably be a permanent blemish. The animal was in good condition, having gained all the weight lost during the first 1½ months in the hospital. The prognosis given

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

4

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.