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Urethral Calculi In A Bull

A. Neuman
Iowa State College

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Urethral Calculi In A Bull. A 4-year-old Angus bull was admitted to Stange Memorial Clinic April 13, 1947, with a history of difficult urination. The patient was constantly dribbling urine and there was extensive subcutaneous edema of the ventral portion of the abdomen. A tentative diagnosis of urethral calculus was made.

On April 16, the bull was placed on the operating table in a left lateral recumbent position. An attempt was made to get the bull to protrude his penis by massage of the organ. However this attempt failed. Chlorofrom was administered very slowly to the patient until the penis could be extruded from its sheath. A sound of electrician’s fuse wire was passed up the urethra for 24 in. and then it stopped. An incision was made at this point into the lumen of the urethra and two urinary calculi were removed. These were roughly \( \frac{3}{4} \) in. in diameter and approximately spherical in nature.

The penis was then permitted to recede and the operative area covered with a thin paste of sulfanilamide powder in sterile distilled water. The wound was left to heal as an open wound.

The next 4 succeeding days the wound was irrigated with the thin sulfanilamide paste. During this time it was evident the bull was feeling much better. However, when urination occurred, the process was very painful and some urine always came through the wound.

Six days after the operation on the urethra, urine was passing freely from the urethral opening. Treatment of the wound was discontinued, and the patient was observed daily.

On May 5, a muco-purulent bilateral nasal discharge was noted. The bull was

Calculi found on necropsy of Angus bull.
in extreme pain at intervals and spent much of his time lying down. The urine was bloody and it could not be detected if it was coming from the urethral opening or not. It was decided to place the patient on the operating table for further examination.

The next day the bull was cast and placed in a left lateral recumbent position on the operating table. He died there a few minutes later.

Autopsy revealed both kidneys to be about twice their normal size and each contained thousands of abscesses up to 5 cm. in diameter. Both renal pelves were filled by uroliths up to about 60 gm. in weight. The ureters were 10 mm. in diameter and the walls were chronically thickened. The urinary bladder walls were chronically thickened with connective tissue to about 8 mm. The bladder contained hundreds of uroliths from sand-like grains up to about 1 cm. in diameter. The stones had eroded the bladder wall, causing hemorrhage; for free blood and numerous clots were present in the lumen of the bladder. The urethra contained a few small uroliths.

The kidneys were X-rayed and each contained thousands of uroliths varying greatly in size from small grains up to 1 cm. in diameter. Each little abscess contained one or more uroliths.

The abscesses were cultured and revealed a pure culture of Corynebacterium renalis; however, death of this animal was due to terminal uremia.

—A. Neuman, '49

2 Penicillin in the Treatment of an Open Joint. On the evening of April 18, 1947 an albino 3 year old mare was entered at the Stange Memorial Clinic with the history that the right hock had been cut on a fence the morning of April 17, 1947. The veterinarians who first attended the animal had applied a pressure bandage infiltrated with powdered sulfanilamide to control hemorrhage and administered tetanus antitoxin. They gave a very unfavorable prognosis and recommended taking the animal to Iowa State College. On April 19, or approxi-

mately 48 hours after the injury, the bandage was carefully removed and a liquid that resembled synovial fluid oozed from the wound. The wound was extensive and deep on the anterior surface of the hock, and it extended from the lateral side of the proximal end of the metatarsal bone in an upward and medial direction toward the tibial tarsal bone. The horse could not extend the leg. The wound was not probed to determine whether or not it extended into the joint cavity because of the possibility of starting hemorrhage again. It was decided to inject penicillin suspended in cod liver oil into the tibio-tarsal and the tarso-metatarsal synovial sacs. According to Sisson, the tibio-tarsal synovial sac lubricates the joint formed by the distal end of the tibia and the trochlea of the tibial tarsal bone. It communicates with the proximal intertarsal synovial sac which lubricates articulations between tibial and fibular tarsal bones and the central and fourth tarsal bones. The tarso-metatarsal synovial sac lubricates the articulations between the proximal ends of the metatarsal bones and those formed by the third tarsal with the bones on either side. Fifty thousand O.U. of penicillin suspended in 4 cc of cod liver oil were injected into the tibio-tarsal and the tarso-metatarsal synovial sacs. The site for the injection was located by palpating the proximal end of the metatarsal bones on the lateral side. The same amount was injected into the tibio-tarsal sac from the posterior side. The place for inserting the needle was determined partly by palpating the tarsal bones and partly by estimating where it should be in relation to the first needle site. When the needle was inserted into the tibio-tarsal sac, synovial fluid flowed out through the needle showing that the sac had not been invaded by the wound. A sulfanilamide pack was bandaged over the the wound. Fifty thousand O.U. of penicillin were administered intramuscularly every 6 hrs. for the next 48 hrs. Two days later, the intramuscular injections of penicillin were discontinued and 50,000 O.U. of penicillin suspended in 5 cc of cod liver oil were injected into the the tarso-metatarsal sac. This time methylene blue was added to the suspension of