Edema of the Sinus

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restrained on the operating table and the penis cleansing with a quaternary ammonium solution. Mild tincture of iodine was then swabbed onto the operative area to produce thorough asepsis. An incision was made into the hematocyst. Approximately 2 liters of clotted blood were drained from the hematocyst. Following the operation, sterile gauze packs were placed in the cavity produced in an effort to control the oozing hemorrhage from the penis. The incision was closed with a blanket suture of braided silk in order to maintain the gauze packs in the desired position. Sulfanilamide powder was dusted on the sutured area. A muslin supporter was used to provide support for the penis following the operation to prevent irritation from walking. An injection of 900,000 O.U. of procaine penicillin was given intramuscularly in the right hip. Following the operation, 1,500 units of tetanus antitoxin were given intramuscularly. It was observed that there was a small amount of persistent hemorrhage for several days following the operation. The patient was placed in a darkened box stall so located that he could not see or hear other horses in the building. This was to prevent the animal from getting excited and erecting, which would have been harmful to him during his convalescence.

The muslin supporter to the penis, the braided silk sutures and gauze packs were removed Oct. 1. The cavity was irrigated with potassium permanganate, 1:3000. of 900,000 O.U. of procaine penicillin was given intramuscularly once a day for five days following surgery. These injections were alternated between the right and left hips to prevent irritation.

The open wound was irrigated with potassium permanganate, 1:3000 from Oct. 1 to Oct. 18. Fly repellent was applied around the surgical site. During the early part of this period some skin necrosis of the penis and prepuce was present and was trimmed away. An exudate was also evident during this period but had disappeared by Oct. 18. The swelling of the first fold of the prepuce was greatly reduced, and the edema of the underline had completely disappeared.

The swelling of the penis and prepuce had completely disappeared by Oct. 19. A hemoglobin, erythrocyte, and a differential white blood cell count was made as well as a fecal examination. No significant variation from the normal was found.

The penis was irrigated with quaternary ammonium solution and powdered with equal parts of boric acid and air slaked lime on Oct. 20.

The prepuce and penis appeared to be completely healed by Oct. 21 and the patient was discharged as normal on Nov. 6.

Charles M. Towers, '50

Edema of the Sinus. On Nov. 11, 1949 a 2-year-old, Standardbred gelding with an enlargement over the frontal and maxillary sinus region was admitted to Stange Memorial Clinic. The accompanying history stated that the animal probably had been kicked on the jaw.

Examination revealed a diffuse enlargement of the bony tissue covering the frontal and maxillary sinuses on the right side of the face. The submaxillary lymph nodes were enlarged and there was no passage of air through the right nostril. It was impossible to pass a stomach tube through the right nasal passage. Further examination revealed that the nasal septum was pushed over to the left side. A snoring sound was made on expiration. Examination of the teeth revealed no obvious abnormality. A tentative diagnosis of dropsy of the sinuses was made.

The patient was placed in the stocks on Nov. 17 and 50 Gms. of chloral hydrate was administered via stomach tube and pump. The horse was then restrained in a left lateral recumbent position on the operating table. The enlarged area was shaved, defatted with ether, and painted with strong tincture of iodine. The area of operation was then infiltrated with 2 percent procaine hydrochloride solution. After anesthesia was complete a circular incision about 1 inch in diameter was made through the skin at the height of
the swelling which was just over the area of the roots of the fourth and fifth upper cheek teeth in the maxillary sinus. A curved bone chisel and mallet were then used to make a circular exploratory trephine opening into that sinus. The sinus was found to be greatly enlarged and the division between the frontal and maxillary sinuses was completely obliterated so that the two sinuses now constituted one enlarged cavity. They were partly filled with a serous fluid. This confirmed the diagnosis of dropsy of the sinuses. The animal was then removed from the table and returned to his stall.

The owner was notified of the condition and the hopelessness of an attempted cure. Destruction of the animal was recommended. The reply from the owner stated that he did not care to have the animal destroyed as it was quite valuable, and that any treatment that might cure the condition was to be employed. The daily treatment while awaiting the reply consisted of irrigating the sinus with warm potassium permanganate solution 1:3000. A warm solution was used for the purpose of alleviating the resistance put up by an animal when a cold solution is used in the sinus.

It was decided that more complete bottom drainage was the only procedure that offered any hope of recovery. Therefore, on Nov. 26 the patient was again placed in the stocks and 50 Gms. of chloral hydrate was administered via stomach tube and pump. The patient was restrained on the operating table in a left lateral recumbent position. A 4½ inch, 16 gauge needle was then inserted about 1 inch below the middle of the right orbit. It was directed inward in a medial anterior direction for a distance of about 3 inches when it came in contact with the palatine bone. The needle was then retracted a short distance and 10 cc. of sterile 2 percent procaine hydrochloride solution was injected to block the maxillary nerve which supplies sensation to the upper cheek teeth. After anesthesia was complete the root of the fourth upper cheek tooth was located and the tooth was repelled, using a mallet and a dental punch inserted through the original trephine opening in the maxillary sinus. Upon its removal the tooth was cut transversely and an open canal was found traversing the dentine of the tooth. This would allow infection to enter the alveolus.

A dental pack, to which tincture of iodine and glycerine equal parts had been applied, was inserted into the alveolus and tied with suture tape to a second pack in the trephine opening. Subsequent treatment consisted of changing the dental packs daily and irrigating the sinus with warm potassium permanganate solution 1:3000. Petrolatum paste was applied to the area surrounding the wound to protect the skin from the exudate draining from the trephine opening.

On Nov. 30 it was noticed that the enlargement on the dorsal surface of the face had reduced somewhat in size but there was still no passage of air through the right nostril. The respiratory sound on expiration was still noticed, and on Dec. 5 respiration became increasingly difficult.

The owner was again written and told of the hopelessness of curing this condition and destruction of the animal was again advised. The daily treatment of irrigation the sinus with warm potassium permanganate solution 1:3000 and replacing the dental packs was continued until a reply ordering the destruction of the animal was received from the owner.

The etiology of dropsy of the sinuses is unknown. It is probably an abnormality in development of the lymphatic or blood vascular apparatus in the sinus. A diffuse bulging of the sinuses occurs and they become partially filled with fluid. The bulging does not occur from pressure of the fluid however. The anatomy within the sinus becomes greatly altered. The various septa are missing and one large cavity is formed. The only known treatment is drainage of the afflicted sinus and as very few recoveries occur, only an unfavorable prognosis can be given. It is doubtful that the diseased tooth was the cause of the dropsy of the sinus in the case herein described.

The Veterinary Student
Since this case was not responding to treatment, the animal was destroyed after permission was received from the owner.

R. M. Hacecky, '50

Section of the Penis. A yearling Hereford steer was admitted to Stange Memorial Clinic January 12, 1949, with a history of inability to micturate, and a large subcutaneous swelling to the left of the ventral midline and about 2 inches posterior to the preputial orifice. Examination revealed the swelling to be soft and fluctuating. A diagnosis of urethral calculi was made.

The patient was restrained in the stocks on Jan. 17, and the perineal region from the anus to the scrotum was soaped, shaved, and disinfected with iodine.

Anesthesia was obtained by epidural injection of 8 cc. of 2 percent procaine hydrochloride solution. An incision was made on the midline, beginning at the lower edge of the ischium and extending downward about 3 inches. The penis was exposed and separated with considerable difficulty from the surrounding tissue. The urethra and penis were then severed completely about 2 inches from the origin of the corpus cavernosum muscle. The proximal end of the penis was withdrawn through the incision and fixed with a stay suture, leaving the end projecting. The initial incision was sutured with simple interrupted silk apposition sutures, leaving drainage at the ventral commissure.

The animal improved the first two days after the operation and ate, urinated and defecated normally, the urine escaping from the stump of the urethra. The third day after the operation, the animal was depressed and failed to eat, therefore a blood urea test was conducted. The findings showed normal renal function.

Depression was so great the morning of Jan. 18 that further examination revealed the abdominal swelling to be inflamed and to contain soft spots. Aspiration of the contents proved the swelling to be due to escaped urine and not edema as had been previously presumed. The animal was again restrained in the stocks and the area over the abdominal swelling was soaped, shaved, and disinfected with tincture of Iodine. An incision one and one half inches long was made in the center of the enlargement to permit drainage. At that time it was determined that the urethra had ruptured proximal to a calculus prior to the section of the urethra and penis, thus permitting urine to escape into the subcutaneous tissue.

The next day the patient had resumed eating and the swelling had diminished by one-half with recovery proceeding uneventfully until Jan. 25. At that time the skin over the area where the swelling had occurred showed evidence of necrosis; the area was dusted with boric acid and air-slaked lime to hasten sloughing. During the next four days all the skin between the flanks and from the preputial orifice to the scrotum necrosed and sloughed, although the patient seemed only slightly depressed and continued to eat. Equal parts of boric acid and air-

Fig. 10. The posterior abdominal floor as it appeared January 27, the second day after necrosis was noticed.