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Experimental Suppression of Granulation Tissue in the Equine

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inguinal hernia. Symptoms consisted of a hot, hard, and painful bilateral enlargement of the scrotum. The right side was larger than the left. The animal was depressed and weak.

Due to the acute nature of the symptoms, immediate surgical intervention was necessary. Anesthesia was produced by 1.5 cc. Sparine (Wyeth) I.V. and 30 cc. of Equitol (Pitman-Moore Co.) I.V. The animal was placed in dorsal recumbancy and the legs and immediate area were draped. A three inch incision through the skin of the scrotum was made on each side to expose the testicles and their tunics. The testicles were enlarged and the tunics thickened and edematous. The presence of an inguinal hernia was confirmed. The spermatic cords were ligated with #3 chromic catgut. The cords were divided and the testicles were placed in a container to be saved for subsequent bacteriologic examination. Each inguinal ring was sutured with three interrupted #2 chromic catgut sutures. Tetracycline powder was dusted into each incision and the incisions were then closed with continuous sutures of nylon.

Further examination revealed a pervious urachus, which was cauterized with 90 per cent phenol. The pervious urachus was characterized by dribbling of urine plus an opening surrounded by inflammation and edema.

The animal was given 1500 units of tetanus antitoxin and 1,500,000 units aqueous penicillin I.M. The animal was discharged with instructions to the owner to remove the skin sutures in five days. Later inquiry of the owner revealed that the colt made a complete and uneventful recovery.

Bacteriologic examination of the testicles revealed a Streptococcus of undetermined species as the causative factor of the orchitis.

Robert Challoner, '60

Bilateral Hare Lip and Cleft Palate in a Calf. On September 25, 1959, a Holstein bull calf was presented at the Stange Memorial Clinic. The history given by the client pointed out that the calf had been sold at a sales barn at four days of age because it could not successfully nurse its dam. Milk would run out of the nostrils while it attempted to nurse.

In three short weeks it exchanged hands an equal number of times. The present client purchased the animal, hand fed it, and plans to sell it for veal.

The diagnosis Schistocephalus fissipalatinus and S. fissilabrus was made. This is classed as a simple monstrosity because it is an abnormal division of the body, or its parts, in this case the palate and upper lips.

Jerry Hicks, '60

Note the tongue protruding through the calf's left nostril, and the lower teeth appearing at the right nostril.

Experimental Suppression of Granulation Tissue in the Equine.
Excessive granulation tissue (proud flesh) is a common sequela of traumatic injuries, especially in the equine species. The presence of proud flesh delays healing time and it also prevents the practitioner from achieving the desired cosmetic effect in the injured area. Many techniques have been used in efforts to control the formation of granulation tissue. Pressure bandages have merit if properly used. Excessive irritation of a wound, as with irrigation, should be avoided unless one de-
sires to fill in a gaping wound, for running warm water when applied to injured tissue is a great stimulus for granulation tissue formation.

When a case of proud flesh is encountered, the use of a chemical necrotizing agent may be desirable. A paste of sulfur — sulfuric acid can be used advantageously with some cases. Surgical removal with a scalpel followed by actual cautery to provide hemostasis, or the use of actual cautery alone, are used in controlling granulation tissue. Since efforts in control have not proved to be ideal, the following experimental attempt was made to prevent its occurrence.

A two year old filly that had been admitted to Stange Memorial Clinic for the treatment of wire cuts was selected as the experimental animal. Two severe wire cuts were present; one on the dorsal surface of the fetlock of the pectoral limb and another in the same anatomical area of the pelvic limb. Neither injury entered the fetlock joint and both gaping wounds appeared to be approximately the same in severity.

The wounds were cleaned, packed with sulfanilamide powder and then bandaged. Tetanus antitoxin (1500 units) was given subcutaneously. Eight cc. of penicillin streptomycin combination was injected intramuscularly each day for a period of eight days. Bandages were changed daily for six days and thereafter, every other day. Ten days after the initial therapy, the local infection was controlled, and the danger of systemic infection was greatly decreased.

At that time, an experimental corticosteroid, Triamcinolone Acetamide, (Vetalog-Squibb) was applied only to the wound on the hind leg, leaving the other wound as a control. Sulfarea was used with vetalog for its antibacterial, wound cleansing, and tissue adhering qualities. An average mixture of 2 1/2 cc. of vetalog and 2 1/2 cc. of sulfarea was applied topically to the rear wound while only 2 1/2 cc. sulfarea was applied to the wound on the anterior limb. Both wounds were then bandaged. This procedure was repeated every other day for a period of three weeks.

During the period of topical application of this anti-inflammatory corticosteroid compound, the following wound characteristics were noted:

1. The wound on the rear leg had a yellow cast for the first four days, after starting with vetalog, while the control wound had a red appearance. After that time, however, a reverse in the color picture occurred.
2. The control wound held easier during the bandaging procedure.
3. The control wound was less sensitive to light touch.
4. The control wound showed excessive granulation tissue formation. This was easily seen at the junction of the wound and the adjacent intact skin where a buildup of proud flesh occurred. On the rear leg wound granulation was held in check, but the healing process was also retarded as was evidenced by the inhibition of skin growth at the margin of the wound.
5. The small amount of granulation tissue that did form in the vetalog applied wound was of a more meaty consistency than was that of the control wound.
6. The healing time was much shorter for the control wound.

The information learned in the above clinical case was used to advantage on wounds in the hock area of two other clinical equine patients. Vetalog was applied in smaller quantities and at longer intervals (1-2 cc. every 3-5 days) on the latter two cases. A light bandage was applied for 24-48 hours after each application of the drug. By following such a procedure, the formation of excessive granulation tissue was suppressed and satisfactory wound healing did occur.

James L. Carpenter, '60

Incarceration of the Small Intestine of a Steer “Gut Tie.” On May 10, 1959, a yearling Hereford steer was admitted to the Stange Memorial Clinic with a history of abdominal pain, frequent straining, switching of the tail and general depression. A physical examination revealed that the mucous membranes were dark red, the abdomen distended and fluid

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