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Enucleation of the Eye

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Enucleation of the Eye. On Jan. 15, 1954, a Hereford cow was admitted to Stange Memorial Clinic at Iowa State College. The diagnosis was a carcinoma of the right eyeball, which was to be removed. The operation was scheduled for the next day.

The animal was restrained on the operating table, and the operative site prepared by clipping, washing thoroughly, defatting with ether, and disinfecting with 50 percent isopropyl alcohol. A local anesthetic of 2 percent procaine was infiltrated under the skin. Surgical anesthesia was obtained by injecting approximately 6 cc. of procaine in five different places around the eye. A two-inch 18-gauge needle was used and was directed toward the optic nerve in each instance.

For the operation, three sutures were placed equidistant through both eyelids. The ends of all three sutures were left six inches long and tied together to serve as a means of traction. An incision, approximately ¾ in. back from the edge of the lids, was made through the skin around the eye. The incision was continued down to but not including the conjunctiva. The incision was then directed lateral between the eyelid and the conjunctiva toward the orbit. At this point a scissors was used to complete the blunt dissection down into the orbit. A detachable-bladed scalpel is not recommended for this due to the danger of losing the blade or breaking it; a straight scalpel can be used. Sufficient fatty tissue is left to fill the cavity. The lateral muscles of the eye were transected at their attachment to the eyeball. Blunt dissection was continued until the eye could be rotated freely. At this point only the retractor muscle and the optic nerve and vessels were still intact. These were severed down as far as possible with the scissors and the eyeball removed. The cavity was dusted with sulfathiazole powder and packed with sterile gauze. Starting at the lateral canthus the lids were closed with interrupted silk sutures. The two medial-most sutures secured the gauze pack.

Forty-eight hours after the operation the two medial sutures were removed to facilitate removal of the gauze packing. A 1:3,000 dilution of potassium permanganate solution was used to irrigate the eye socket. Sulfua-urea powder was dusted into the cavity and three million units of penicillin given intramuscularly.

A beginning local inflammation was treated with hot packs the third day after the operation. Twenty-four hours later the inflammation was still apparent. A third suture was removed to enable a gloved finger to be inserted to remove the blood clots collected. Three million units of penicillin and 3 Gm. of Streptomycin were given intramuscularly. Hot packs and irrigation were continued the following two days. On January 23, a putrid odor was noticed before irrigation; a sulfa-urea solution was used to irrigate the cavity.

Two days later drainage was being established. The socket was still quite necrotic. Pieces of clotted blood were removed with a finger, and the socket irrigated with a 1:3,000 dilution of potassium permanganate. To prevent irritation from the inflammatory exudate the area below the drainage was cleansed and covered with petrolatum.

The animal was ready for discharge on January 27. The cavity was thoroughly cleansed and two tubes of Combiotic ointment instilled into the socket. Petrolatum was applied on the area of drainage and the patient discharged that afternoon.

The usual outcome is union of the eyelids. The remaining scar along the lids is small with a small white dot of granulation tissue at the medial canthus. By leaving as much periocular fat as possible the cavity will fill in well.

Carl Miller, '55

Atony of the Urinary Bladder in a St. Bernard. On Feb. 15, 1954, the cadaver of a 3-year-old female St. Bernard was admitted to Stange Memorial Clinic for diagnosis. There was a