By April 11, the abdominal wound was granulating satisfactorily. The cervical wound had not reduced in swelling as much as was hoped. The next day the cervical wound was draining satisfactorily and the patient was discharged.

A laboratory report of the histopathologic section of the abdominal tumor revealed it to be a fibromyoma.

D. H. Crawford, '50

Foreign Body in the Esophagus of a Cow. A peculiar case of esophageal obstruction in a bovine was treated at the Stange Memorial Clinic during February. The patient, a 6-year-old Guernsey cow, was admitted to the Clinic on February 18, 1949.

The history obtained was that on February 12, 1949, the cow broke into a hog lot where the owner was feeding garbage. After this the cow was unable to eat and an enlargement was observed in the anterior esophageal region. The local veterinarian passed a stomach tube, but the condition did not improve. The day before her admission a stomach tube could not be passed, and it was advised that the owner bring her to the Clinic.

The symptoms observed when the cow was presented for treatment were: an enlargement in the anterior portion of the esophagus about the size of a large orange, but somewhat irregular in shape; and apparent pain on palpation. The cow was unable to eat and showed dehydration and considerable loss of weight.

An Emont's speculum was placed in the mouth and an attempt made to pass a stomach tube. The tube would either strike a solid object in the esophagus or pass down the trachea. Next, an equine mouth speculum was placed in the mouth. The tongue was pulled out of the mouth and by reaching down into the esophagus, the foreign body could be touched with the tips of the fingers. It was determined to be a lid from a No. 2 (20 oz.) tin can, and was lodged in a horizontal position in the esophagus about 4 or 5 inches from the pharynx. Only the anterior edge of the lid could be reached with the

hand, and then only with a thumb and forefinger. The edge of the lid was bent upwards with the fingers and by rotating it, the lid was easily removed. It was thought that the lid had tipped enough to allow the escape of gas, and a limited amount of swallowing.

After removal of the lid, the patient drank a large amount of water and then began to eat hay. The patient was discharged the same afternoon.

This case is another example of the peculiar things cows will eat and which often become lodged in the esophagus.

E. A. Gubser, '50

Nasal Polypus In The Horse. A 3-year-old Standardbred male horse was admitted to Stange Memorial



Fig. 5. The horse as he appeared when admitted to the Clinic.

Clinic on March 24, 1949, with a growth protruding from the right nasal passage. History indicated that the growth was first noticed about two weeks prior to arrival at the Clinic. Growth was rapid, resulting in complete obstruction of the right nasal passage.

Clinical examination of the animal further revealed a serous discharge from the right eye indicating closure of the right nasolacrimal duct. The submaxillary lymph nodes were enlarged. Palpation of the growth disclosed the tapering shape of the mass extending beyond and under the nasal bones.

The horse was observed for four days with no important change in condition. On March 29 the horse was given 55 Gms. of chloral hydrate by stomach tube and restrained on the operating table. The portion of the growth that protruded from



Fig. 6. Applying traction to the growth.

the nostril was firmly grasped with tumor forceps. Traction was applied to the forceps and the growth was twisted from side to side. After a very short period of traction and twisting, the growth broke loose from its attachment and was removed from the nasal passage. Hemorrhage following removal of the growth was minor in importance.

The growth was found to be an infected



Fig. 7. The growth removed.

fibroma. It was about 10 inches long, 1 inch across at its base and 3 inches in diameter at its free end. The tumor appeared to have detached completely from the nasal passage carrying a covering of periosteum over its base.

The horse was returned to a box stall following the operation and almost immediately started to eat. The lacrimal discharge stopped and the submaxillary lymph nodes decreased in size. The horse was discharged from the Clinic about a week and a half after the operation.

K. M. Giese, '50

## Manganese Deficiency

Manganese deficiency in mammals other than rats and mice has not been conclusively demonstrated. Pigs grow normally on rations containing as little as six parts per million of the element (.0006 percent). The claim that lameness in swine on practical rations is sometimes due to manganese deficiency lacks confirmation. Holstein and Guernsey cows have been reported to remain in manganese balance on rations containing around 15 parts per million but more successful reproduction and improved milk yield have been observed on rations containing 40 parts per million. On the whole it would appear that the modest requirement of mammals for manganese would be fully met by rations carrying less than the amounts commonly found in feeds. However, further work on this point is  $n \in eded$ .