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Kenneth Harris  
*Iowa State University*

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gions. Most "wobbler" cases occur in animals under three years of age.

Other disease processes that may cause incoordination, such as encephalomyelitis and lead toxicity, usually show other signs such as an increased temperature, disturbances of consciousness or of the sensorium, and possibly of the gastro-intestinal tract.

The cause of the incoordination is a degeneration of the spinal tract(s). This may be a result of trauma, osteoarthritis of the vertebrae, invasion of the cord by nematode larvae, abscesses in and around the cord, protrusion of an intervertebral disc, and bony protrusions into the canal com-

pressing the cord. In some instances no apparent cause for the degeneration is present. In the majority of cases it would appear that trauma may be the causative factor.

Treatment is usually unsuccessful. The horses may show a slight improvement for a short time, but usually get progressively worse or stop at some stage and don't recover. Anti-inflammatory agents may result in a temporary relief in some cases, but the horse usually relapses when treatment is stopped.

The radiographs shown with this article are not of this case but are of other "equine wobbler syndrome" cases.

a case report:

## *Surgical Relief of Colic in an Equine*

Kenneth Harris\*

Surgical intervention in the treatment of colics of the horse is of value only in certain displacements and impactions. The etiology of the colic must be considered before surgical relief is attempted. Uncomplicated spasmodic colic will usually subside within a few hours with or without treatment. Colics caused by aneurysms of the anterior mesenteric artery or its major branches are very commonly observed and offer a poor prognosis regardless of the type of treatment employed. Those colics caused by impactions, torsions, and intususceptions may respond

\* Kenneth Harris is a junior in the College of Veterinarian Medicine at Iowa State University.

to surgical correction. The problem is one of making a diagnosis of the cause, then by making a decision as to the type of treatment most likely to be successful. Farquharson stated (1940): "Deferring operation in a clear-cut operable case, to substitute other forms of therapy and then operate as a last resort is not encouraged." In recent years, several authors have disputed the time-honored theory that horses are more predisposed to peritonitis than other species of domestic animals (1,4). Shock is considered to be a more probable occurrence before, during and following surgery. (1)

Diagnosis of the cause of colic may be difficult in foals and small ponies if a rectal examination cannot be made. In mature horses, it may not be possible to palpate per rectum far enough anterior to make a definitive diagnosis. Clinical observations of the symptoms shown during the attack(s) may be of value in establishing the cause of the colic. Displacements of the intestines usually result in colics of a rather violent nature rapidly becoming more severe, the animal's condition deteriorating rapidly. Impactions usually result in a more prolonged, but "duller" type colic. Because of the difficulty of establishing a definitive diagnosis, laparotomies are often used to determine the cause of colic, then are continued as an attempted correction.

Three anatomical approaches may be considered: paralumbar fossa, midline, and para-midline. Each surgeon evaluates these approaches differently (3,4). Age, size, temperament, condition of the animal, physical facilities, and available help are factors to be considered. There are possible undesirable post-operative consequences that may result from any of the three approaches:

1. Herniation and evisceration through the midline and para-midline approaches (3,4).
2. Healing by second intention in the paralumbar approach (3,4,5).

### **SUBJECT**

An overly fat five year old female quarterhorse weighing approximately 1350 pounds was approximately three months pregnant, but had a very docile disposition.

The mare was admitted for examination on August, 30, 1965, at 9:30 p.m. The animal had shown signs of depression 48 hours previously, and began to exhibit colicky symptoms for approximately 10 hours prior to admittance. The animal was given several quarts of mineral oil via stomach tube within an hour of the onset of clinical signs of colic. Several parenteral injections of smooth muscle relaxants were given for several hours before the animal was brought to the clinic. During this period of time (10 hours) the mare

would lie down and roll if not prevented from doing so. She was walked almost constantly during this period and no feces were noted to have been passed.

After the mare arrived at the clinic, she was observed for approximately one-half hour. During this time she would attempt to lie down if not walked. Very few, if any peristaltic sounds could be heard, other than a few "gas pings". The abdomen appeared distended. Rectal palpation revealed that the mesentery was palpable on the left side of the midline. It felt taut and the mare exhibited pain when it was manipulated. Few fecal balls were found in the rectum; these were coated with a thick, tenacious mucus. No other abnormality could be palpated. A tentative diagnosis of displacement of the small intestine was made, and surgical correction was elected as the method of treatment.

### **SURGERY**

Anesthesia was accomplished by the use of 200 cc of Equithesin\* IV for induction, and closed-circuit inhalation system of Halothane\*\* for maintenance. The mare was positioned in right lateral recumbency and the left flank prepared for surgery. After draping, an eight inch skin incision was made midway between the last rib and the tuber coxae. The subcutaneous fascia was incised, and the muscle layers penetrated by blunt dissection.

The opening through the muscle layers was widened by separating the fibers parallel to their long axis. The peritoneum was penetrated with a scissors, then widened by blunt dissection.

The surgeon's arm was inserted full length into the peritoneal cavity, and a 180° clockwise rotation of the mesentery of the small intestine was palpated. The intestinal mass was then rotated back into normal position. Further palpation revealed an 8 to 10 inch mass of ingesta causing an impaction of the small colon. The impaction was broken down by digital manipulation without bringing the mass to the exterior.

\* Contains chloral hydrate, magnesium sulfate, and pentobarbital sodium Jen-Sal.  
\*\* Fluothane—Ayerst.

Two grams of tetracycline hydrochloride\* in 1000 ml. sterile physiological saline was instilled into the peritoneal cavity. The muscle layers and the peritoneum were closed with three doubled no. 3 chromic catgut sutures (simple interrupted). The subcutaneous fascia was closed with a simple continuous suture of no. 0 chromic catgut. The skin was closed with a continuous interlocking (Glover's) suture of heavy duty Vetafil.

#### AFTERCARE

Immediate post operative medication consisted of: three million units of procaine penicillin IM, 1500 units of tetanus antitoxin IM, and 2 grams of phenylbutazone\*\* IV.

Surgery was completed at 11:30 p.m. and the mare was on her feet at 1:30 a.m., 31 August, 1965. Gas was passed almost immediately after the completion of surgery. The mare was walked for 15–20 minutes hourly until 6:30 a.m. at which time she no longer exhibited pains of colic.

The mare passed feces shortly after 8 a.m. 31 August. Mineral oil was administered via stomach tube and the mare was hand walked periodically during the day. Three million units of procaine penicillin IM was continued for a ten day period. The mare was hand walked three times per day for the first five days. Three days post operatively, the lower 3½" of the incision opened. Daily flushing with sterile

saline and dressing with tetracycline hydrochloride powder under a sterile bandage was carried out until a bed of granulation tissue had formed.

The mare was discharged from the clinic 25 September, 1965. At this time, the incision had completely healed, and hair was beginning to grow over the operative site.

The mare was observed by the author in mid-October at a show and had won a blue ribbon in her class. One of the owners was contacted in mid-January, and at that time the animal was still carrying the foal and was in good physical condition.

#### SUMMARY

A case of 180° clockwise torsion of the mesentery of the small intestine and impaction of the small colon in a five year old, three month pregnant quarter horse mare was presented to the Iowa State University Veterinary Clinic. Successful surgical correction of the condition is described; the mare made an uncomplicated recovery without aborting the fetus.

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\* Polyotic Soluble Powder—American Cyanamid  
\*\* Butazolidin Injectable—Jen-Sal