1954

Paratuberculosis in a Bovine

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the evening another ampule of Digifolin was given. On July 4, the patient died.

Post-mortem examination revealed a valvular vegetative endocarditis involving the left atrio-ventricular valve, marked cardiac dilatation and a hemorrhagic infarct in the lateral wall of the left ventricle measuring 3 cm. in diameter. Two emboli were present in the left coronary artery that supplied the infarcted portion of the myocardial wall. Multiple renal hemorrhagic infarcts were detected, and there was also a generalized chronic passive hyperemia with a moderate amount of hepatic cirrhosis.

Valvular defects and cardiac dilatation are not uncommon findings in old dogs, but coronary thrombosis has seldom been diagnosed in a living dog.

**Gary Kempers, '55**

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### Cystic Calculus in a Pekingese

On Sept. 30, 1953, a three-year-old Pekingese female was admitted to Stange Memorial Clinic. She was emaciated, depressed and appeared toxic with a history of being sick periodically for the past two years. She had been treated several times for a kidney infection by a local veterinarian. Her owner noticed a hematuria along with frequent and scanty urination, and thought she could feel a stone in the abdominal area. Palpation of the abdomen revealed a large circumscribed mass in the region of the bladder; fluoroscopy disclosed a cystic calculus. Because kidney infection was suspected, a blood urea determination was made and found to be 172 mg. per 100 cc. of blood.

Although the patient was a poor surgical risk, a cystotomy was decided upon for the following morning. In the meantime, the patient was given 200 cc. of dextrose and B-complex solution and 70 cc. of parenamine subcutaneously. In addition, 250 mg. of aueromycin was given orally. The latter was given to control infection in the bladder, but the patient vomited the medication a short time after administration. The patient was more depressed in the afternoon and became comatose. During the evening prior to surgery, she died.

The post-mortem findings revealed uremia as the cause of death. A cystic calculus, measuring approximately 7 x 8 cm., was found along with focal nephritis of the left kidney, a thickened bladder and an ulcerative hemorrhagic gastritis.

While this case is not unusual in itself, it serves well to emphasize the necessity for a thorough examination of the patient: the cystic calculus was easily palpable and should not have been overlooked previously.

**Jerry Shey, '54**

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### Paratuberculosis in a Bovine

On Aug. 17, 1953, a three-year-old Shorthorn cow was admitted to Stange Memorial Clinic with a history of a chronic intestinal disorder. There had been other animals with the same symptoms in the neighborhood, and a creek which ran through the pasture where this cow grazed also ran through several other neighboring pastures.

Samples of blood, urine and feces were collected and tested. The blood and urine samples tested negative for any pathology. A few nematode ova and coccidial oocysts were found in the fecal sample.

On August 20, a test was run using avian tuberculin. Six cubic centimeters of avian tuberculin was injected intravenously at 9:10 a.m. The results were as follows:
<table>
<thead>
<tr>
<th>Time</th>
<th>Temperature</th>
<th>Respirations (per minute)</th>
<th>Bowels</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:15 a.m.</td>
<td>101.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:15</td>
<td>101.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11:15</td>
<td>102.4</td>
<td>.40</td>
<td>no diarrhea</td>
</tr>
<tr>
<td>12:15 p.m.</td>
<td>104.2</td>
<td>.45</td>
<td>slight diarrhea</td>
</tr>
<tr>
<td>1:15</td>
<td>104.8</td>
<td>.48</td>
<td>loose bowels</td>
</tr>
<tr>
<td>2:15</td>
<td>105.0</td>
<td>.55</td>
<td>no diarrhea</td>
</tr>
<tr>
<td>3:10</td>
<td>104.6</td>
<td></td>
<td>diarrhea</td>
</tr>
<tr>
<td>4:15</td>
<td>104.0</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>5:05</td>
<td>103.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:20 a.m.</td>
<td>101.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A temperature rise of 1.5 degrees or more over the pre-injection temperature is considered positive. The physical reaction of diarrhea, chills and dyspnea are often present. The Intradermal Johnin Test can also be used to diagnose this disease. This test requires a single injection in the caudal fold, vulva or skin on the side of the neck and is read in 48 hours. A positive reaction is evidenced by a diffuse swelling 3 mm. or more in thickness at the site of injection.

Necropsy revealed the following lesions: (1) pronounced thickening of the mucosa of the intestinal tract typical of paratuberculosis; (2) numerous acid-fast organisms were found in the intestinal mucosa and in the regional lymph nodes.

This case demonstrates the value of running an Avian Tuberculin Test on any chronic intestinal disorder in cattle characterized by recurrent diarrhea and progressive emaciation.

Kenneth Turner, '54

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**Amputation of the Hind Leg of a Dog.** A four-year-old Collie was admitted to Stange Memorial Clinic on April 4, 1953, with the left hind leg severely injured at the region of the tarsus. Examination revealed that the joint capsule was exposed, tendons and muscles severed and that there was only a piece of skin and muscle attaching the distal portion of the limb to the tarsus.

The patient was placed on the operating table and the area of the leg and flank were prepared for surgery. Pentobarbital sodium was given intravenously to effect, and 2 cc. of oxalic and malonic acids (Koagamin) was injected intramuscularly to help control hemorrhage.

The site selected for amputation was just above the stifle joint with the removal of the distal end of the femur in mind. A semi-elliptical incision was made on the lateral side of the leg just above the stifle joint and a similar incision made approximately one-fourth inch more dorsally on the medial side. Subcutaneous hemorrhage was controlled with hemostats. The saphenous artery and vein were isolated on the medial side, ligated with catgut and severed. Muscles, tendons, nerves and blood vessels were cut laterally, anteriorly and medially to expose the distal portion of the femur. Hemorrhage was again controlled with hemostats. The femur was cut with a saw so that the end of the bone was approximately three-fourths to one inch shorter than the surrounding muscles, thus providing tissue to cover the severed bone when the incision was closed. Ligatures of catgut were applied where necessary and the hemostats removed. Interrupted sutures of catgut placed about one inch apart in the superficial fascia were used to close the wound, and continuous sutures were inserted between them to give added strength and security. The skin was closed with interrupted sutures of nylon.

Post-operative care consisted of administering 500 cc. of 5 percent dextrose subcutaneously, 800,000 units of penicillin and 1 Gm. of streptomycin intramuscularly. The antibiotic therapy was continued for four days with administrations every 12 hours and gradually decreasing the dosages each day.

The patient was up and walking around the day following the operation. There was a small amount of swelling present, but the sutures were all in place and the skin in good apposition. The patient proceeded to make an uneventful recovery with the incision clean and dry at all times. The sutures were removed the sixth day following the operation and the incision was completely healed at this time. The patient was discharged on April 16.

Conrad Steiner, '54

Iowa State College Veterinarian