

Cullen (J. S.)

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## PYOMETRA IN A CAT.

BY T. S. CULLEN, M.B., Assistant Resident Gynecologist,  
The Johns Hopkins Hospital.

It has been thought advisable to publish this case on account of the apparent rarity of the affection, and also, because both cornua uteri reached such an immense size.

The cat from which the accompanying specimen was obtained was brought to the Pathological Laboratory of the Johns Hopkins University and the following history was given by the owner.

The animal's abdomen commenced to enlarge six years ago; the swelling gradually increased since then. She had no kittens during this period. Locomotion was difficult on account of the large abdomen. Her general health was said to be good and her appetite normal. One week before her death the umbilical girth was 70 cm. There was very little sagging in the flanks and on percussion a distinct wave of fluctuation could be elicited. The death was gradual, the animal in the last few days refusing to eat.

*Autopsy by Prof. Welch.*—On opening the abdomen it was found to be perfectly dry. The vagina just within the orifice was greatly constricted, not admitting the finest probe. Above this it was slightly dilated. Both uterine cornua were enormously dilated throughout their entire length resembling sausages in their contour. The length of each was 45 cm. and the maximum diameter 25 cm. Each presented three constrictions with corresponding bulgings. Both passed outward, upward and then downward and inward.

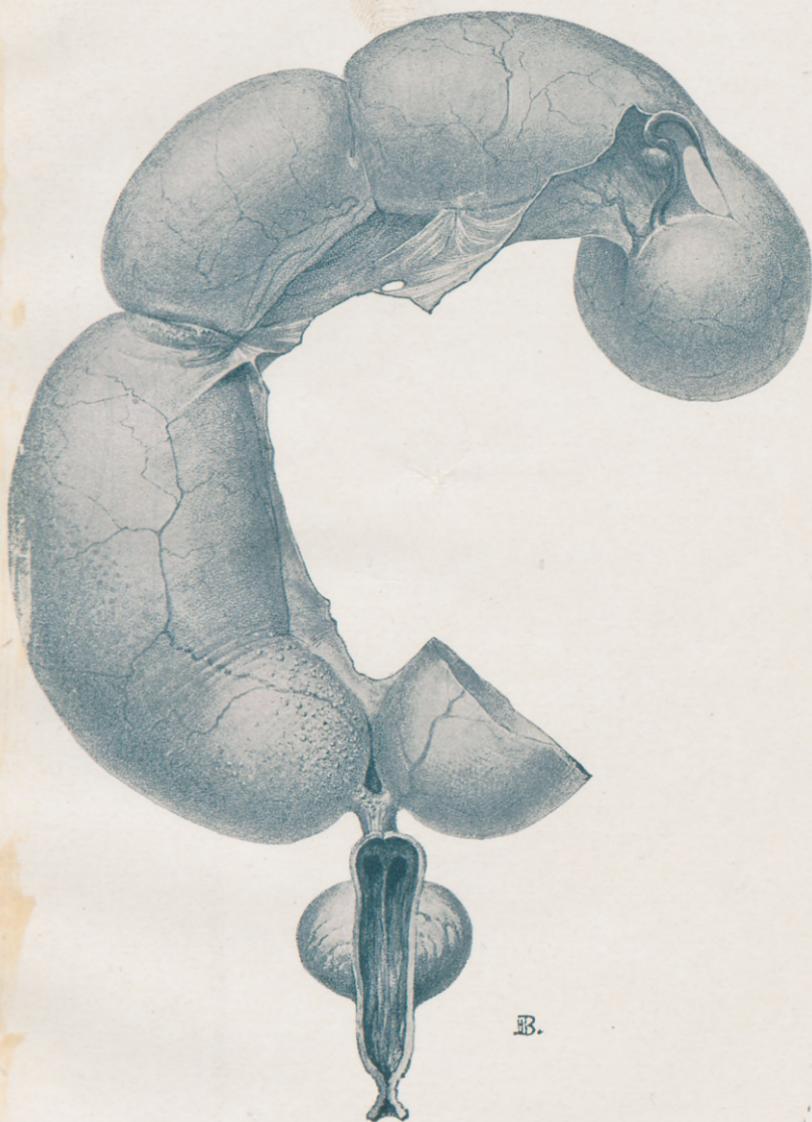


They were smooth and glistening and of a pinkish color. On their anterior and posterior surfaces, however, near their origin were large areas covered by whitish nodules varying in size from a pin's head to 2 mm. in diameter. These were not surrounded by any inflammatory zone. Similar nodules were present along the lines of constriction. Numerous branching blood vessels were seen coursing over the walls of the cornua. Shining through the walls, especially over the middle portions of the cornua, were many small irregular dark red patches, resembling ecchymoses. The cornua together contained 2600 cc. of a thin, dirty, greyish white pus. This had no odor, contained many large cells filled with fat droplets, polynuclear leucocytes, detritus and myriads of short bacilli with rounded ends. These bacilli were half as long again as broad and closely resembled the colon bacillus in form. Cultures from the pus were negative. The inner walls of the cornua were smooth and glistening but there were slightly raised areas, corresponding to the dark ecchymotic spots seen externally. Both tubes and ovaries were apparently normal. Nothing further of note was to be seen in the abdominal or the thoracic organs.

*Histological examination.*—The vaginal mucosa is everywhere intact and appears to be normal. Just beneath the epithelium there are isolated patches in which the connective tissue cells had undergone considerable proliferation.

The cornua are covered externally by flat epithelium, this becomes cuboidal in the vicinity of the white nodules above described. These nodules are composed entirely of connective tissue moderately rich in cells, having irregular triangular nuclei. The nodules have a very scanty blood supply and are intimately adherent to the uterine walls. The muscular coat shows here and there small aggregations of connective tissue cells.

The mucous membrane in some places is represented by one layer of cylindrical epithelium, in other parts by a few round glands, and corresponding to the dark patches hæmorrhages had taken place in the stroma of the mucosa. The surface epithelium over such areas is raised from the stroma by the blood but is



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everywhere intact. One might at first sight be inclined to think that there was atrophy of the mucosa but taking into consideration the extreme distention of the uterus there was probably no atrophy.

Sections from the bladder, tubes, ovaries and liver showed the structures to be normal.

The exact cause of the condition in this case cannot be stated positively, but the constriction near the vaginal outlet may have been the exciting factor. It is interesting to note the slight alteration that has occurred in the vaginal and also in the uterine walls, there being apparently only little increase in the connective tissue elements. The fibrous nodules have probably been produced by a mild peritonitis set up by the cornua rubbing against neighboring structures.

The fact that the surfaces of the cornua on either side of the constrictions were covered by these small nodules, as above mentioned, also seems to indicate that these nodules were caused by friction of the opposing surfaces on each other.

*Description of Plate.*—The view is from the posterior. It shows the narrowed vagina, the bladder, and the dilated left uterine cornua. Only the commencement of the dilated right cornua is seen. The left tube and ovary are also visible.

The small nodules are seen at the commencement of the right cornua.



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inference from the bladder, other organs and liver show the structures to be normal.

The exact cause of the condition in this case cannot be stated positively, but the connection with the vaginal outlet may have been the exciting factor. It is interesting to note the slight elevation that has occurred in the vaginal and uterine walls, these being apparently only little contracted as the connection between the fibrous vessels have probably been ruptured by a mild process set up by the tumor relating against neighboring

The fact that the surface of the tumor on either side of the cord was well covered by these small nodules, as above mentioned, also tends to indicate that these nodules were caused by extension of the opposing tumor on each side.

View of Vagina—The view is from the posterior. It shows the narrowed vagina, the bladder, and the dilated left uterine cornua. Only the commencement of the dilated right cornua is seen. The left tube and ovary are also visible. The small nodules are seen at the commencement of the right