

Post-Mortem Revelations

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THIS article is intended principally for second-year students. You men are now getting your introduction to the study of disease in the course in general pathology. Next quarter this introduction will be continued in the course in the pathology of the systems of the body and of the specific infectious diseases. But your formal study of pathology will not stop there. As third-year men you will drop into the post-mortem laboratory at the clinic, whenever your class duties permit, to observe the cases being necropsied by the seniors. Then finally when your last year arrives you will appear in that laboratory again as the prosectors yourselves. It is about the work in the post-mortem laboratory that this article is written. It is a suggestion that you commence now to anticipate what you will do and see there, and begin to lay plans to make the most of your opportunities there during your third and fourth years.

Opportunities

Briefly, your opportunities will be these: 1. To learn simple and satisfactory methods of opening and eviscerating animals. 2. To correlate the symptoms shown by sick animals in the hospital with the gross alterations seen in the organs at necropsy and often also the microscopic changes in sections of the organs and tissues. 3. To compare the anatomic variations in organs in the various species of animals, and even in the breeds within a species. 4. To review the anatomy of the different systems of the body in their fresh state. 5. To observe the effect of medicinal treatment and surgical procedures. 6. To discover the cause of undiagnosed or obscure ailments.

Functions

This listing of the opportunities in the

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post-mortem room suggests the two-fold function of the course in post-mortem pathology. First, it affords a means of applying the information received in the lecture and laboratory courses in general and special pathology to animals that have actually succumbed to disease. In this respect it serves a very practical purpose, similarly as does the laboratory work in operative surgery to the courses in surgical clinic. Secondly, it functions as a means of diagnosis along with information concerning the history of the case, with the interpretation of symptoms, and the results of any clinical laboratory tests which are appropriate.

It is plain to be seen that the students who get the most value out of attending these post-mortems, or in performing them, are those who visit the animals frequently before they die. Only in this way can their symptoms be observed. Their case records can also be studied. The writer has never heard an Iowa State alumnus who is in practice complain that spare time spent in this manner was wasted.

Post-mortem Facilities

The conditions under which these post-mortem examinations are made are comparatively excellent. The 40x40 foot room, with both southern and northern exposures, its high ceiling and large windows, its ventilating fans and suspended heating units, its lead top tables with an abundance of running water, and its adjoining locker room with shower, is a comfortable and sanitary place in which to work at all seasons of the year. Exclusive of your ambulatory clinic trips, and your assignments in the diagnostic and clinical laboratories, the instruction in the post-mortem laboratory is the most informal you will receive here since only three to four

students are assigned to the instructor. In this small group the students and instructor become intimately acquainted. The animal furnishing the material for the laboratory exercise supplies subject matter for all sorts of discussion in the field of veterinary science. The class is usually under no great pressure because of the volume of work or the limit of time. On the average only one animal is examined in the three-hour period. This gives ample time for a rather complete necropsy. The fourth-year students take turn about in carrying out the technic. When unusual lesions are encountered or when a student is curious about a particular pathological process, blocks of tissues are preserved for sectioning. These are studied a week or ten days later by any who are interested.

Sources of Material

You probably wonder about the source of the animals which furnish material for this class. They have four origins: 1. Cases which die in the hospital. 2. Ambulatory clinic cases which die on the farm and are brought in for autopsy. 3. Animals that have been used by the third-year men in operative surgery laboratory. 4. Animals brought in by the owner for destruction with permission granted for post-mortem examination. More than 200 animals a year are examined. When one considers that most of these animals have been hospital cases the number may seem exceedingly high. When it is realized, however, that at our clinic a higher per cent of incurable cases is received than a practitioner would encounter in an ordinary practice the number is not alarming. In 1938 only about three per cent of the animals hospitalized reached the necropsy room. During the past year such hopeless cases have had malignant internal tumors, strangulated hernias, torsion of the intestines, uterine rupture, verminous thrombosis, leukemia, fractures, internal hemorrhage, pneumonia, foreign-body penetration of internal organs, open joints, and septicemia and pyemia arising from various local infections.

Summary

The gist of this brief article can be summarized in three sentences: 1. You second-year men should begin now to anticipate the experiences which can be yours in the clinic combined with the post-mortem laboratory, and should let this anticipation be an incentive for making you get the most out of your pre-clinical introduction to veterinary medicine this year. 2. In your third and fourth years study the clinic cases thoroughly while they are alive, and if they die follow them to the post-mortem laboratory. 3. At the post-mortem try to correlate the symptoms shown by the animal with the lesions discovered, that is, relate your clinical observations to the post-mortem revelations.

Urinary Calculus

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While working with Dr. J. E. Weinman, Lincoln, Nebraska, I was fortunate to observe a urinary calculus in a female Airedale. The patient was brought to the hospital with the history of constant attempts at urination and dripping of urine for over eighteen months. In bringing the animal from the car to the hospital it made frequent attempts to urinate with only a few drops as the result.

A general examination was made resulting in apparently normal pulse, respiration and temperature. By gentle digital palpitation the bladder was found to be very hard and a little smaller than a baseball. The above history indicated the possibility of a urinary calculus.

The patient, a nine year old female, weighed approximately forty-five pounds. The animal was given two grains of morphine sulphate and 1/150 grain of atropine sulfate, with ether completing the anesthesia. With proper technique and antiseptics, the abdominal floor was opened exposing an extremely vascular, thickened bladder wall. The bladder was opened disclosing four urinary calculi, faceted