

### Fetal Retention and Reaction Following Transfusion in a Boxer

**Bitch.** On July 21, 1959, a one year old boxer bitch was presented at the Stange Memorial Clinic, Iowa State University, with a history of parturition seven days previously, the pups being normal in appearance and progressing satisfactorily. However, the owner became concerned when symptoms of sluggishness, anorexia and vomituration were demonstrated by the bitch, even though she was still nursing her litter.

Examination of the patient revealed a slightly depressed individual. Her general appearance was still fairly good, but she exhibited signs of toxicity characterized by a sub-normal temperature, injection of the conjunctiva and buccal mucous membranes, and the previously mentioned lassitude. A dark greenish discharge was noted on the external genitalia, and abdominal palpation disclosed the presence of a hard mass within the uterus. A tentative diagnosis of fetal retention was made. Direct examination of the accessible internal genitalia revealed that the cervix was still dilated and the pelvic canal remained unobstructed.

With this in mind it was decided to attempt uterine stimulation as a therapeutic measure, for though the elapsed time left only a slight possibility of success, the treatment would not be detrimental under existing conditions. Five units ( $\frac{1}{2}$ cc) of Pitocin (Oxytocin Injectable — Parke, Davis & Co.) were injected intramuscularly, but did not result in noticeable stimulation of the atonic uterus.

Following failure of the hormonal therapy, the client's permission for surgery was obtained and pre-operative preparation was initiated. In order to combat the existing toxicity and the possibility of shock such as might be expected with this type of surgical procedure, the surgeon ordered a transfusion of 250 cc. of whole blood. The blood used had been collected 48 hours previously from a healthy euthanasia case, preserved with ACD solution (Anticoagulant Acid Citrate Dextrose Solution, U.S.P.), and stored under refrigeration. No untoward symptoms were

noted during the actual process of transfusion, but shortly thereafter massive edema of the periorbital tissues, cheeks, and jowls appeared. Extensive edematous plaques (hives) covered the entire trunk, and the extremities were swollen. Auscultation revealed pulmonary edema with splashing sounds and moist rales.

Antihistaminic therapy was ordered with the onset of hives, but as the pulmonary edema became rapidly evident it was decided to administer Adrenalin (Epinephrine HCL, Parke, Davis & Co.) instead of the antihistamine. One-half cc of 1:1000 Adrenalin was injected intramuscularly. In addition, 100 cc of 10% dextrose with saline was instilled into the peritoneal cavity as a dehydrating agent to aid in the reduction of the edema. The therapy was rapidly successful in remission of the pulmonary symptomatology, but the subcutaneous edema persisted in some degree for two hours. The last to disappear was that edema involving the periorbital tissues and palpebrae.

Toward the end of this period the actual surgery was begun, and exposure of the uterus revealed multiple abscessation with necrosis, some of the necrotic foci having completely penetrated the organ. A local, hyperemic non-exudative peritonitis was noted in the immediate area, but massive peritonitis had been prevented by adhesion of the omentum to the necrosed areas of the uterus. Oophorectomy was performed, and incision of the excised uterus confirmed the initial diagnosis. The palpable mass was a fetal pup in the advanced stages of necrosis. The peritoneal cavity and abdominal viscera were flushed with sterile physiological saline solution, and one gram of Panmycin (Tetracycline Hydrochloride — Upjohn) was instilled into the peritoneal cavity as the incision was sutured.

The post-operative recovery period was uneventful, as was the remainder of the dog's stay in the clinic. Examination of the animal's medical history showed no previous record of blood transfusion.

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