

# Rounds

Animal Health  
Department

Medical Rounds

"medicine for all"



Caring for Stranded Marine Animals

NATIONAL  
MARINE  
L I F E  
CENTER

# Notes

Veterinary Research  
Department

Under the microscope

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Rounds Notes is a report on the health of animals at the National Marine Life Center from Sea Rogers Williams VMD for the staff, volunteers, and community of the center including professionals involved the captive care of similar species, the views expressed are not necessarily that of NMLC. Information in Rounds Notes should be considered confidential and used solely to benefit the health of aquatic animals everywhere.

September 22, 2009

Rounds Notes

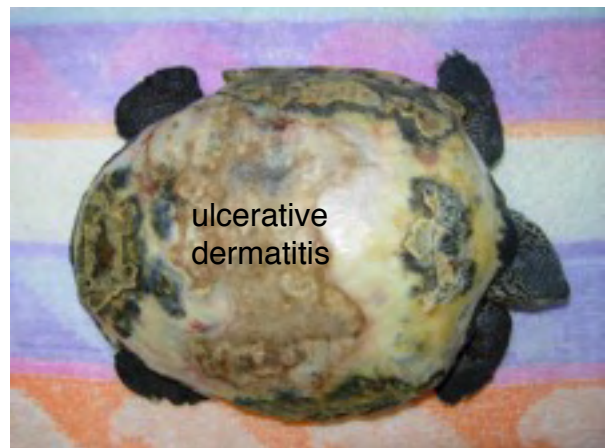
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## Headlines News: Sad news, and So long Patty

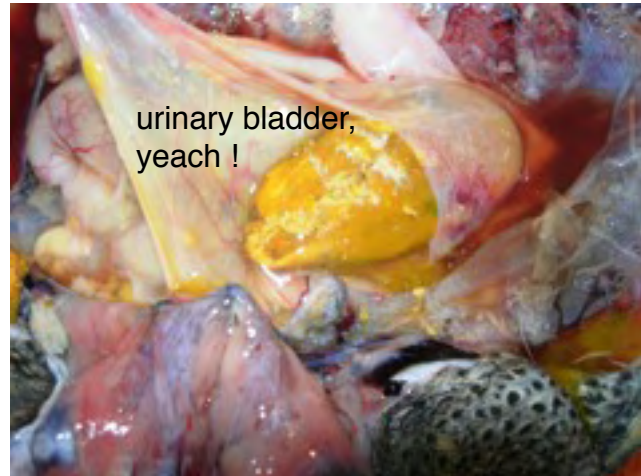
### Patty dies of suspected mutli-organ failure, sepsis and coelomitis

After what we hoped was a rally last week after we corrected Patty's acidosis (pH=7.5), hypokalemia (K=4.4 mmol/L), and hypoxia (SaO<sub>2</sub>=98%), but she never ate on her own again. Despite tube feeding at least daily and reptile ringers solution she developed hypoglycemia (glu=19 mg/dl) and died Monday afternoon. She was being treated for *Vibrio alginolyticus* sepsis with ceftazadime (30 mg/kg SQ q3 d) and enrofloxacin (10 mg/kg PO q3 d- in tube feedings), which were appropriate based on antibiotic sensitivity testing of the blood isolate.

The necropsy exam further documented the large (1/3) carapace ulcer covered with connective tissue and the failure to ever completely remineralize. The mouth was closed in rigor and the superficial peeling of the plastron appears to be normal shedding. The skin was sunken but in good condition, the eyes and other external exam was within normal limits. The body cavity was greatly involved with generalized coelomitis with adhesions to the the liver, stomach and intestines, and hemorrhagic free fluid. There are several white foci on the liver and a few in the adherent coelomic connective tissue. The serosal surface of the stomach and intestines had small and large hemorrhages. The spleen had adhesions to its surface. A section of intestine was distended with material consistent with the tube fed gruel, and indicates ileus. No perforations of the stomach or intestines were observed nor was there evidence of aspiration



pneumonia grossly. The urinary bladder was greatly distended, thin and friable. The contents were yellow and mucoid with urates and a large semi-solid mass in the lumen of the urinary bladder that had a strong fecal odor. Any attempt to perform a coelomic lavage would have perforated the urinary bladder. The cloaca was normal grossly. The right kidney was green-yellow-tan and the left renal tissue difficult to identify. The sub-carapacial mass (previously biopsied) was removed and was dark brown with a section of necrosis. It is possible the necrosis was caused by the biopsy and the material renal, but this is not supported by the biopsy, the tissues were collected for histopathology. The lungs were collapsed and not consolidated, they had areas of black pigmentation and floated in formalin. The CNS and proximal spinal cord were normal and collected. There was no evidence of iatrogenic damage from blood/lymph sampling from the medial femoral vessels but the vascular system and lymph structures were not distinct at necropsy. Both ovaries were associated with adhesions, inflammation and numerous small follicles.



Histopathology (with re-cuts) will be forwarded to NorthWest Zoo Path for further analysis.

### Gross Findings:

**Ulcerative dermatitis, carapace, chronic, severe**

**Coelomitis, diffuse, severe and involving the digestive and reproductive tracks, leading to ileus**

**Hepatitis, multifocal, moderate, superficial**

**Retrograde fecal contamination of the urinary bladder, chronic, severe**

**Mass, left renal area with necrosis (see previous biopsy)**

**The cause of death is likely multi-organ failure secondary to bacterial translocation through the large carapacial ulcer, causing bacteremia and sepsis, but could also have originated from the digestive or reproductive tracts. Antibiotic and supportive therapy was appropriate but ultimately unable to deal with the severe systemic disease.**

**Sample Jar 1**

urinary bladder  
esophagus  
spleen  
intestines, several sites  
intestine and pancreas  
stomach  
lungs R &L, trachea  
muscle tissue

**Sample Jar 2**

right kidney  
CNS  
femor fragments with marrow  
eye  
liver foci

**cassette 1**

liver white foci  
coelum covering with foci

**cassette 2**

ovaries

**cassette 3**

pleuoperitoneum

**cassette 4**

left mass (renal ?)



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