

Rounds

Animal Health
Department

Medical Rounds

"medicine for all"



Caring for Stranded Marine Animals

NATIONAL
MARINE
LIFE
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 10, 2009

Rounds Notes

19: 44-46 (2009)

Headlines News:

There's Something About Patty

I became concerned that the dermal bone exposure with the shell lesions represented deeper disease and that sequestrum and necrotic bone could be present deep in the shell without my knowledge. These concerns were spurred by a shell disease in river cooters that caused multiple deaths and had clinical similarities with Patty (Garner, Herrington et al. 1997). These areas, if present, would have to be opened and debrided. Ordinary radiographs would not show this so, off to the CT at Dr. Ketten's WHOI CSI lab, where Julie Arruda assisted Joanne and I and a somewhat corporative Patty to get a scan.

What we found was startling. First the lungs of terrapins may not be as efficient as sea turtles, large open spaces that I would interpret as vast useless spaces of emphysema from a sea turtle lung may be normal for terrapins. I am in the process of tracking down some terrapin scans for comparison.

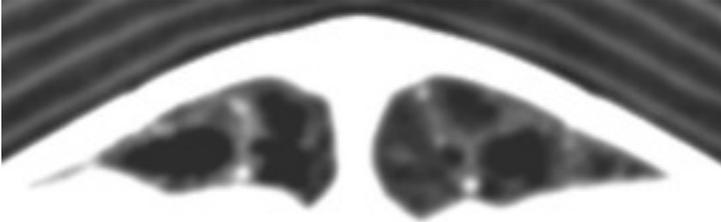
Next, was the large homogenous structure in the body cavity that seems to have pushed everything else to the periphery.



Neatly tucked into the

shell where it can not be palpated, I was unaware of this large structure. Patty's appetite has been very good although she had not gained weight, and fecal production was sporadic and not always recorded on her chart.





Some 3-D images were created to help localize the structure which seems to be contained, bilobed, and caudal in the body cavity. In the CT images it was not 100% clear if this was reproductive, gastro-intestinal, neoplastic, cystic, an abscess or what exactly.



To get a better handle on this finding an ultrasound was performed this morning and confirmed that Patty is gravid with small embryos forming in various states up to 0.75cm in diameter. The structure was indeed fluid filled and held within a structure and did not appear as free fluid in the coelom. The structure may communicate with the ovary which showed more development on the left.

Because the location and involvement of the GI was still not clear a barium study was started to outline the esophagus, stomach, and intestines. I would not want to stick a needle into the GI as this has a great risk of infection. The study should take a few

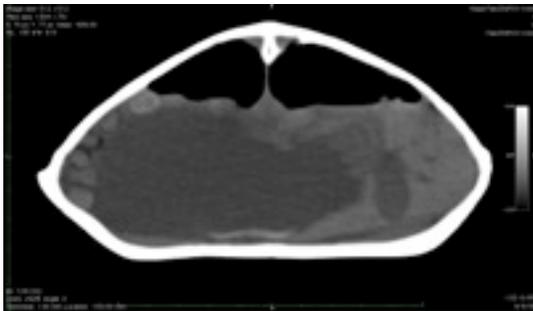
days to fully outline nought of the the GI to see how this lines up against the mass.

If this the uterus and it is fluid filled problems with gestation and ovipositing and development could follow, and if Patty is not able to contribute to the population the push for wild release is certainly impacted.

I have stopped the

enrofloxacin as this is not helpful to the cartilage development of embryo turtles.

This is a significant development in the rehabilitation of Patty and the full significance of these findings is not yet understood. A centesis and fluid analysis and culture are the next steps and I can not rule out that Patty has a surgical condition, so stay tuned.



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Bibliography

Garner, M. M., R. Herrington, et al. (1997). "Shell disease in river cooters (*Pseudemys concinna*) and yellow-bellied turtles (*Trachemys scripta*) in a Georgia (USA) lake." *J Wildl Dis* **33**(1): 78-86.

