



Rounds Notes is a monthly report from Sea Rogers Williams VMD, the views expressed are not necessarily that of the National Marine Life Center. Information in Rounds Notes should be considered confidential and used solely to benefit the health of aquatic animals everywhere.

December 11, 2008

Rounds Notes 4: 7-9 (2008)

Headlines News: Temporary Turtle Tanks Take Tenants

Let's meet the new sea turtles:

Fletcher cold stun Loggerhead sea turtle stranded: 11/29/08

Turo, Fisher Beach left black and **yellow** band

NMLC CC-08-19 MH 08-177 CC ST 08-109

Found on 11/29/08 above the surf with occluded nares, upside down at 7:30am, and with the typical triad of metabolic disturbances, lactic acidosis, hypercapnia and anoxia and a core body temperature of 44.4°F. There were bruises and a cut near the right eye and various minor crusts and abrasions. After a gradual warming the turtle was started on the typical sea turtle regime of ceftazadime [22 mg/kg IM q 3 day, 7-10 injections] on day four. Treatments also included fluid therapy at 1% body weight and some cautious bicarbonate to combat the acidosis [NaHO3 0.06 mEq/kg].

Flech arrived at the center on 12/4/08 and Dr. Dunnigan performed the admit exam with Brian as the admitting officer according to protocol. Some black stool with mucous was passed on 12/8/08 which could be digested blood or melena.



Melena is digested blood and has the appearance of coffee grounds or tarry stools, bright red blood and mucous come from the colon or rectum. The sample from 'Fletch' is consistent with bleeding from the intestines (small and large) and sucralfate was started [1 g PO q 12-24 hr] by pilling or in food. Sucralfate can bind to injured mucosa of the proximal gastrointestinal tract acting as a prescription strength Pepto-Bismol. Mucosal ulceration is a well defined property of severe hypothermia and cold stunning in sea turtles and is not unexpected. The mucosal lining is capable of self repair but if the integrity is disrupted bacteria from the GI can translocate into the blood stream and if an artery is breached a significant and life threatening intestinal bleed can occur.

A full set of radiographs was taken (and Fletch does not fit on a single large cassette) but no osteolytic lesions or significant abnormalities were observed.

Problem List: "Fletch"

Cold Stun / hypothermia	11/29/08	resolved
Immunosuppression	11/29/08	active
Suspected melena	12/8/08	active

Initial Plan:

Meds: ceftazadime for 30 days (evaluate Jan 4)
sucralfate for 1 week
Radiographs: Dec 9, Dec 30, Jan 20, Feb 20, April 20
IDEXX Blood: Dec 9, Dec 30, Jan 20, Feb 20, April 20
i-Stat: q 3 days until stable.

Captain Caveman cold stun Kemp's Ridley
with aspiration and dehydration stranded: 11/23/08

First Encounter Beach, Eastham, right purple and orange band

NMLC LK-08-20 MH 08-165LK ST 08-102

Found on 11/23/08 at 54.5°F weighing 2.9 kg, algae encrusted and obtunded showing little signs of life, this little turtle was not expected to survive. A critical care exam found a heart rate 11 bpm but in respirator arrest (no respirations in 20 min.). The nares were occluded and the turtle was dehydrated and underweight. Blood gas analysis found the typical triad of metabolic disturbances of lactic acidosis, hypercapnia and anoxia. The ionized calcium and magnesium were elevated and once the turtle was intubated seawater was suctioned from the lungs and major bronchi, and life saving positive pressure ventilation was continued until spontaneous respirations returned. Gurgling could be heard for another day and a single dose of furosemide was given to decrease fluid accumulations [5 mg/kg IM]. A culture of the fluid found *Aeromonas* and a Gram negative rod, both of which were sensitive to ceftazadime which was started along with fluconazole.



The Captain arrived on 12/8/08, under the same admission team of Bridget and Brian. I arrived back from Prescott Reviews the following day, and completed initial evaluations with blood work and a full radiographic series. We will continue the GI prokinetics and anti-gas medications and evaluate the GI motility with a barium study using BIPS (barium impregnated polyethylene spheres).



Sea water aspiration is a grave presenting complaint, in addition to the severe elevation of uric acid (16.8 mg/dl), which too is associated with a poor prognosis. Anoxic changes and hypothermia induced damage to the intestinal tract may be irreversible and pneumonia is almost guaranteed. We need to monitor GI motility, nutritional balance, metabolic function, and watch for a host of infectious conditions associated with the immuno- suppression of cold stunning. We'll perform a tracheal wash next week to check for growth of bacteria or fungi in the lungs and monitor blood gas status and renal function.

Problem List: "Captain Caveman"

Cold Stun / hypothermia	11/23/08	resolved
Immunosuppression	11/29/08	assumed
Azotemia/renal dz	11/23/08	resolving
Positive buoyancy	11/23/08	active
Aspiration of sea water	11/23/08	active



Initial Plan:

Meds:	ceftazadime for 60 days (evaluate Jan 23)
	fluconazole (with antibiotic therapy)
	simethicone 1/4 tablet PO with food 7 days
	metoclopramide 0.3 mg/kg SQ PRN (doctors orders)
	fluids PRN (10-20 ml Normasol-R or 'reptile ringers' SQ)
Radiographs:	Dec 9, Dec 30, Jan 20, Feb 20, April 20
IDEXX Blood:	Dec 9, Dec 30, Jan 20, Feb 20, April 20
i-Stat:	q 3 days until stable
Diagnostics: GI motility study	BIPS: start Dec 11 3pm, DV radiographs SID
Tracheal Wash:	Dec 16

Systems

Temporary Life Support System are up and running, with two isolated systems, Temporary Turtle Isolation (TTI) with "Fletch" and multi-tank system, Temporary Turtle Tubes (TTT 1-3), with Captain Caveman currently in TTT-3. Water quality is necessary daily with chlorine levels, pH, temp, salinity, and weekly total coliforms (more frequent when requested of if chlorine levels are low) and ammonia cycle

Sea Turtles at Large

No word from Lavender, but we have not given up hope yet. Turtles can go several months without a transmission and the tag was set to send signals less frequently during this period. The end of cold-stun season is upon us, meaning that the conditions have been so severe that the likelihood of finding more local living sea turtle on the Cape is not anticipated, and at least Lavender did not re-strand.

Terrapins & Cooters

Red bellied cooters: We're in the middle of growth rates when compared to the other facilities, which is right where I'd like to be. The pack (is it a pack of turtles?) prefers the Romain lettuce, on the weekly Repto-Min days we feed 12-13 sticks and wait for them to be taken before adding a few leaves of Romain and / or Red-leaf lettuce, it does not take long.

Diamond back terrapins: All four are eating well and growing. Blackie and Blueberry have developed some algae growth on their shells; we can clean this off with Q-tips soaked in chlorohexidine. Let me know if any algae starts to adhere to the skin.

Safety Seals (health and safety tips around the center)

Bio-safety: Remember to follow the quarantine and bio-security procedures, sea turtles can carry *Salmonella* too, and we don't want any cross contamination.



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