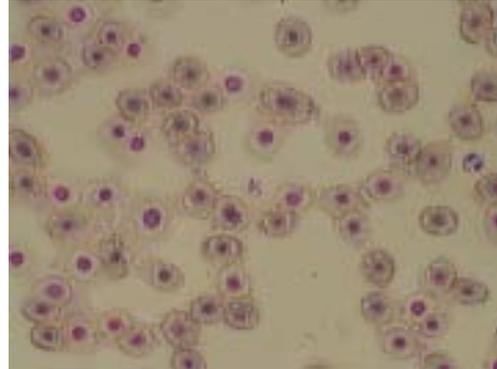# Rounds Notes

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.

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Headlines News: Enterococcus[1]

Originally described as group D streptococci, we now know that Enterococcus is separate genus of around 20 species, of facultative anaerobic Gram positive cocci that are normal flora of the human body and some animals. The presence of Enterococcus is not alarming, and the bacteria can be commonly isolated, however, they should not be present in 'sterile' or sites such as blood, CSF, and mammal urine. Enterococcus has become a concern in human medical fields as a nosocomial infection causing sepsis, urinary tract infections, and endocarditis. Mortality rates vary, but are significant with enterococcal sepsis which is an indicator of a poor prognosis. Prior use of cephalosporin antibiotics and immunocompromised states are important risk factors. Another major issue found in human medicine is the combined intrinsic and acquired antibiotic resistance of some isolates making treatment complex and difficult.

A diagnosis requires isolating the bacteria from a sterile site and ascribing pathological effects associated with the infection. CNS and abdominal CT scans, ultrasound, echocardiography, and plain film radiography of the chest are considered appropriate diagnostic tools for human patients. Treatment of choice is penicillin / ampicillin if the isolate is sensitive. Addition of a potentator such as clavulanate is used when beta-lactamase inhibitors are present. For serious infections combined therapy is indicated and testing for aminoglycoside synergy should be preformed.

So how concerned should we be ? well, with Caveman who has bacteriemia, hypoglycemia, necrotic wounds, anorexia, and free gas trapped in the coleum, in a word, *very*.

Clinical Update:

Claveman: Caveman is holding on and we're continuing to treat with ampicillin, enrofloxicin, and fluconizole for Entercoccus septicemia and pneumonia. He is still positively buoyant and we have preformed two colemic tap procedures and removed 45cc of free gas from the body cavity. The extra efforts to swim are also taking a toll on the little turtle, who is still not eating on his own and whose low blood sugar requires Caveman to be held out of the tank in the incubator many nights. We are supporting Caveman with daily fluids, which contain dextrose, and a daily herring gruel that is tube fed into

the esophagus. The barium spears (BIPS) are starting to pass, with a GI transit time of over 19 days, but this is good news. Fecal exams have found plant material and no signs of parasites.

An ultrasound found no significant lesions and helped guide the body cavity procedure. Blood gas results have been satisfactory but a low potassium has lead to an oral potassium supplement being used in preparing the gruel. Hopefully we can switch to oral medications soon.

The wounds are healing but some bruising on the plastron may be an indicator of a serious internal disorder.

Plan:

Offer food twice a day (it's ok to be a little annoying with fish or squid)

If not eating administer 30 cc reptile ringer's SQ SID and 20-30 cc of fish gruel with an oral potassium supplement. [Potass-a-chew].

In the afternoon take a drop of blood with a insulin syringe and needle (27g needle) and measure the blood glucose. The Accu-check correlates very well with the i-Stat, so we will continue to use it. If the blood glucose is greater then 80 mg/dl, ok to leave swimming, if it's low, return Caveman to the temperature matched incubator. Treat the wounds with SSD and coat the skin and shell with the water based lubricant gel and coat the eyes with the sterile ophthalmic lubricant.

Continue with medications according to the treatment sheet. Note activity, location in the water column, respiratory rate (over 5 min.) and other observations in the medical record. Radiographs will now be weekly until the rest of the BIPS have passed. Call if any concerns.

Fletcher: Fletch is doing well and off antibiotics. A blood culture is negative so far and we'll continue to monitor with blood work, but at least he's eating well and making a good sea turtle mess of his tank. Brian and his Dad improved the water quality with another large protein skimmer that was added to his life support system.

Terrapins

Retained skin is still and issue for our diamond-backs. In the wild, when turtles shed their skin it is removed by the environment with the animal's movement. We may have our little ones growing faster then their wild counter parts and their tank may be less diverse then the wild, thus shed skin may be retained. The most common problem with this phenomena, is the old skin bunching up and causing strictures or a lack of blood flow to their very small digits. Keep up with the daily inspections, and if shed skin is causing a problem, gentle use of a moistened Q-tip to remove the material. If it does not come off easily or looks dangerous, give me a call right away.

Sea Turtles at Large

Hooray ! we all received a joyous check-in from Lavender who is near the coast of North Carolina, this is an unexpected treat but a reasonable location to expect Lavender at this time. Some turtles over winter in this area and start to return north in the spring, or we may see even further southern movement.

Lavenders's tag is set to transmit less frequently at this point so these long periods without communication may be something we all have to live with, at least Lavender is living with it in safer and warmer waters for now.

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REFERENCES

1.   Varman, M. and A. Chatterjee (2008) *Enterococcal Infection*. emedicine **Volume 971259**, 1-16