Rounds Notes
Animal Health Department
Medical Rounds
"medicine for all"
NATIONAL MARINE LIFE CENTER
Caring for Stranded Marine Animals
Veterinary Research Department
Under the microscope
rwilliams@nmlc.org

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.

March 23, 2011 *Rounds Notes* **3**: 5 -7 (2011)

Headlines News: Trichosporonosis, in reptiles still elusive

if only turtles had hair

The latest culture (3rd attempt) sent for fungal isolation failed again due to bacterial overgrowth. With so much background in the cultures we could rely on the molecular data and the identification of Trichosporon species (99% *T. dermatis or T. mucoides*) but which was it ? A quick PubMed search for Trichosporon yields over 550 articles on the biology and pathology of this genus of mould. Most cases involve immunocompomized hosts and there appears to be a division among the 20 or so species of those that cause only superficial keratin infection (the diseases White and Black Piedras) and those that can cause invasive and disseminated, and sometimes fatal disease. As luck would have it, in our case, the former is more benign and the latter can be problematic. After consulting with the Texas Fungal Identification Laboratory, we will attempt to culture the yeast here before sending it off for species identification. Our yeast (the one effecting the shell of Catch-22) has a well defined and repeatable morphology that we can readily detect, and so our success or failure should be apparent. Starting with some highly antibacterial growth media (SAB DEXT + cholor and gent) might help.

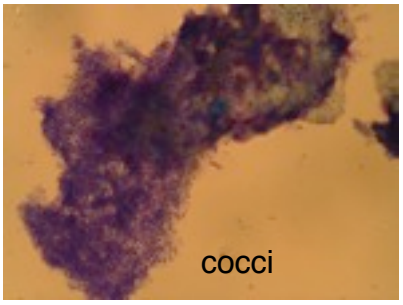
As it stands, Catch22 suffers only from a disease of cosmetic morbidity (I love this phrase and it gives new meaning to 'ugly duckling'). When Trichosporon effects the keratin of the hair shafts of people (White Piedras) the offending hair is just shaved off, and even more bizarre practice of some indigenous peoples to encourage the growth of Trichosporon on their hair as a form of hair coloring (Black Piedras).

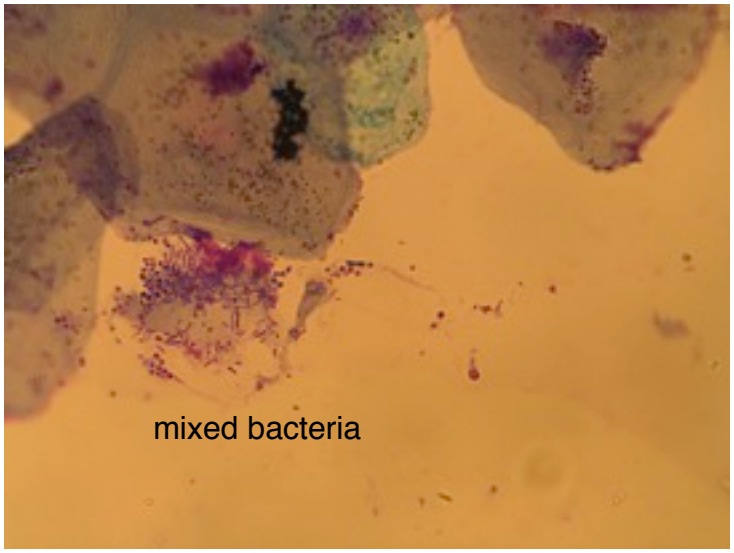
Who is at risk for systemic Trichosporonosis? The human literature is clear, the immunocompromised (AIDS, chemotherapy, transplant recipients), use of chronic systemic corticosteroids, cancer patients, burn patients, and premature neonates. Zoonotic reports are scarce and I could find none from any reptile species, but dogs, rabbits, cows, horses and monkeys have been infected. Is Catch22 at risk for systemic disease? not currently, but I feel further investigation is warranted in this fungal infection of the shell on an endangered species.

Clinical Update: Little Cooters, Little Lesions

let's not let a 'marginal' disease become a problem

It's that time of the year again, four of the red bellied cooter hatchings have developed mild ulcerative dermatitis lesions between the scutes. The lesions are small pits and are associated with rapid turtle growth and water quality. We have seen this each year and have kept it from becoming a problem by cleaning the shells of effected cooters. The Cooter Carapace Cleaning Protocol has been reposted and is in the clinic. I treated #2, 5, 7, 8 today. Each uses their own toothbrush for cleaning (you would not want to share a toothbrush, neither do these cooters). For now, let's clean the shells 2-3 time a week, and if more cooters are effected, or we notice the areas growing we will have to increase the frequency of cleaning.





Cytology from #2&7 showed a mixed bacterial populations are present in the gook removed from the small ulcerative pits, and a single protozoa, likely eating the bacteria that is present, and more of a water quality

indicator then any form of pathogen. We know where the bacteria come from, and the total coliform test is selective, meaning all of these Gram positive cocci and killed off in the growth media. What allows these lesions to get started ? water quality ? scratches ? rapid shell growth ? we don't know for sure but perhaps this is how the fungal infection that Catch22 has got started, so let's not allow that to happen here and keep the cooters clean and healthy.

Clinical Update: Teanna bides her time

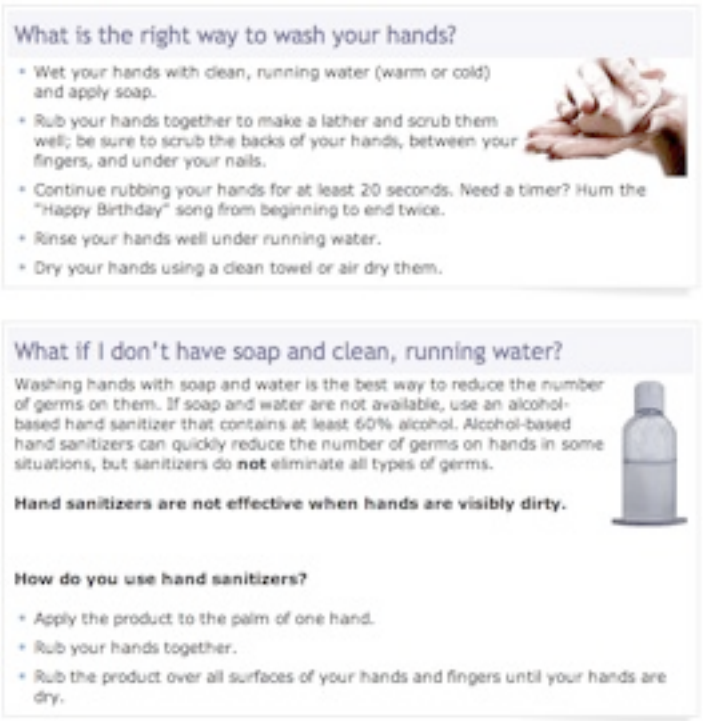
as soon as the snow stops

Teanna is doing well, and we will consider a release exam and blood work if the snow ever stops!

Safety Seal of Approval:

Wash, wash, wash your hands

With additional cultures potentially going on in the clinic remember, no food or drinks in this area. Wash your hands after even being the in the clinic, and always wash throughly before eating or drinking. Wear gloves when handing animals or bacterial/fungal culture plates, vials, or tank water (it has bacteria, just look at the total coliform counts). Change gloves if they leak and between patients, wash hands between tasks. And remember looking at the soap dispenser while briefly wetting the hands is NOT hand washing. We already have E. coli in the clinic culture dishes used for water quality so be careful. Bacteria can't jump from a dish to grab you, and can be cleaned away with proper and routine hygiene. Bacteria and yeast are not dangerous when handled appropriately and we take reasonable precautions.
Here are some tips from the CDC:



What is the right way to wash your hands?

- Wet your hands with clean, running water (warm or cold) and apply soap.
- Rub your hands together to make a lather and scrub them well; be sure to scrub the backs of your hands, between your fingers, and under your nails.
- Continue rubbing your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
- Rinse your hands well under running water.
- Dry your hands using a clean towel or air dry them.

What if I don't have soap and clean, running water?

Washing hands with soap and water is the best way to reduce the number of germs on them. If soap and water are not available, use an alcohol-based hand sanitizer that contains at least 60% alcohol. Alcohol-based hand sanitizers can quickly reduce the number of germs on hands in some situations, but sanitizers do **not** eliminate all types of germs.

Hand sanitizers are not effective when hands are visibly dirty.

How do you use hand sanitizers?

- Apply the product to the palm of one hand.
- Rub your hands together.
- Rub the product over all surfaces of your hands and fingers until your hands are dry.

C Roger Williams VMD

Sea Rogers Williams VMD
attending veterinarian and director of science

[STAFF: Kathy Zagzebski, Kate Shaffer, Adele Raphael, Bridget Dunnigan]