PCA analysis revealed that the triplicates of each protocol for the 4-time points analyzed are close to each other, related to the good quality of our experiments. The differential gene expressions (DGE) showed significant (P < 0.05 and Log2 fold change >1) differences at H0 which highlights the impact of the protocols on the TC process. The highest number of DGEs was observed between H0 and H1 for the three protocols, where about two 410 DGEs, two 1000 DGEs, and 2000 AA, OZ, and EB, respectively. After analysis of the PCA plot during the kinetics, EB and OZ are grouped while AA is not. That could be explained by the presence of FBS in OZ and EB protocols.

Conclusion: By running the three protocols in parallel, we showed here that the kinetics of TC generation differed between each other with a significant variation of the transcriptome. This is an important finding that proves the way to compare more deeply the transcriptome of C. neoformans during TC generation with the final goal is to identify the genes associated with TC generation.

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Scalp fungal microbiome and sebum composition in males with and without androgenetic alopecia
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Poster session 3, September 23, 2022, 12:30 PM - 1:30 PM

Objectives: Lipophilic Malassezia species are abundant in the scalp microbiome; we investigated the scalp microbiome and sebum composition of patients with androgenetic alopecia (AGA) and aimed to identify factors accelerating AGA progression.

Materials and Methods: Scalp skin samples (wax) were collected from 35 male Japanese patients with AGA and 63 healthy individuals. Fungal 16S rRNA genes were amplified by PCR and the amplicons were sequenced on the Miseq platform. The extent of fungal colonization was determined by qPCR. We used gas chromatography/mass spectrometry to measure the sebum levels of free fatty acids, diglycerides, triglycerides, squalene, free cholesterol, cholesterolester, and wax.

Results and Discussion: Malassezia verticillata predominated in all AGA (64.7%) and non-AGA age groups (44.6%). qPCR revealed that Malassezia colonization was more extensive in the AGA than non-AGA group, regardless of age; the Malassezia level was significantly higher in AGA subjects aged 10-19 than 10-49 years. The TG level was significantly higher in the AGA than non-AGA group (P < 0.05), but the free fatty acid, squalene, and free cholesterolester levels were significantly lower (all P < 0.05).

Conclusion: The scalp fungal microbiome and sebum composition may influence AGA development.

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‘It’s not fungus, its Nocardia’—an elementary diagnostic challenge for draining sinus on abdominal wall (rare): a case report
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Introduction: A rare finding of abdominal wall clinical presentation of persistent progressive manifestation with draining sinus with no granules caused by Nocardia brasiliensis.

Methods: History: A 22-year-old presented to the Dermatology OPD with complaints of swelling and tenderness and discharging sinuses with no granules around the periumbilical region in the lower abdominal area for three years. His initial fine needle aspiration cytology specimen report was inconclusive. He received anti-fungal treatment based on a positive Montenegro test and family history from outside the hospital.

Initially punch biopsy samples were sent for fungal processing to our laboratory which was inconclusive. Repeat punch biopsy and punch biopsy samples were subjected to conventional techniques. The sample was inoculated on Sabouraud’s Dextrose agar, Brain heart infusion agar, and Loeffle’s-Jensen media. Direct smear was subjected to Gram stain and Modified Ziehl-Neelsen stain with 1% Sulfuric acid as decolorizer.

Results:
1. On Gram stain, Gram-positive filamentous bacilli against a background of pus cells in pus aspirate only (not in punch biopsy specimen).
2. Modified Ziehl-Neelsen stain with 1% Sulfuric acid decolorizer was performed on all three samples. Beaded acid-fast filamentous bacilli with plenty of pus cells in the background were seen in pus aspirate only (not in punch biopsy specimen).
3. No fungal elements were observed on the 20% KOH mount.
4. Cytocentrifuge were filtered immediately with the provisional report of possible Actinomycetes or due to Nocardia sp.
5. Growth was observed within 9 days on SDA as well as L.J. It was a chalky white, dry colony to begin with that turned orangish-yellow in another week’s time. Smear from the colony showed Gram-positive filamentous bacilli which on Modified ZN smear were acid-fast filamentous beaded bacilli. The isolate was identified as Nocardia species. This was further confirmed as Nocardia brasiliensis by MALDI-TOF.

On admission, the patient was initially started on Ibu, Ancikacin and then changed to Modified Raman regimen of double dose Cotrimoxazole and Gentamicin. His lesions started showing improvement over 2 weeks of in-patient treatment. He was discharged on oral treatment thereafter.

Conclusion:
- Abdominal wall clinical presentation of persistent progressive manifestation with draining sinuses with no granules caused by N. brasiliensis is a rare clinical entity in Mycoetoma. The differential diagnosis would lead to either bacterial or fungal etiology or mycelium.
- Delay in correct diagnosis led to the chronicity of the clinical presentation with inappropriate therapy.
- For a chronic destructive debilitating infectious mycotic presentation, appropriate microbiological diagnosis become essential to have early correct diagnosis with proper sampling technique to guide the appropriate therapy as per the causative pathogen.