Pseudo Outbreak in Bronchoscopy
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Situation

Case investigated with facility Infection Preventionist, Infectious Disease, and Endoscopy Personnel
When One of Your ID Physicians is Worried..

One of those days.....

- ID physician notifies Infection Prevention (IP) regarding a few patients that they have been referred on with Mycobacterium Mucogenicum cultured from bronch specimens within the last few months.
- IP requests lab reports from Micro and 7 patients are identified with positive cultures from May 2017 to January 2018.
- According to the pulmonologist, the positive specimens did not seem to have clinical significance for the involved patients.

Reference text; 2018
Investigation

Specimens collected during bronchoscopy procedures conducted in the Endo Lab by the same provider

- 2 cases in May
- 1 in June
- 1 in September
- 1 in November
- 1 in December
- 1 in January

- Attack rate for the one pulmonologist = 9%
- Attack rate for other pulmonologists = 0
Investigation

Background

- There were no cases of *Mycobacterium Mucogenicum* in 2016.

- There were two other cases of *Mycobacterium Mucogenicum* in 2017 outside of the GI lab, both in the OR, from pleural fluid and one from an incision s/p laminectomy surgery. These cases were excluded from our case reviews.

- The involved pulmonologist began at the facility in Jan 2017.

- A new therapeutic scope, was purchased for this physician’s procedures and is used almost exclusively for their cases.
Investigation

*Mycobacterium mucogenicum* isolates are associated with a wide spectrum of clinical disease in both immunocompetent and immunosuppressed individuals. They are also commonly implicated in outbreaks of infection resulting from contaminated hospital equipment and water sources.
Investigation

- All cases with the exception of one (6/7) from June 12th had two scopes that were used on all procedures a Therapeutic Scope 2723002 and EBUS scope 1910523. The EBUS scope is used by various providers in the facility.

- Saline was kept on ice in syringes or in a specimen cup for cold lavage. The saline was also kept on the field where specimen containers were set.

- Ice for the cold saline was kept in a cooler in the procedure suite.
Investigation

▪ All scopes are reprocessed via Automated Endoscope Reprocesser (AER), Olympus OER Probe.
▪ All scopes are pre-cleaned with an Enzymatic Cleaner and underwent HLD with Acecide-C as the disinfectant.
▪ There are 4 AERs in the GI lab and anyone can be used to process the scopes.
▪ The biopsy instruments, forceps, used are all disposable and range in brands depending on the technique used in a case.
Recommendations
Recommendation:

- Clean and disinfect ice machine
  - Maintenance had just been performed. We had them repeat.
- Discontinue use of ice for cooling saline on the field during bronchoscopy procedures
- Request lab to save available isolates if needed for later analysis.
- Observe procedures by the provider
- Inquire regarding available Methods to Culture Scope
- Send Scope for Inspection to Manufacturer to check for internal scratches or defects
- Notify S/A Team regarding surveillance of Mycobacterium Mucogenicum cases
Issues

- Cold saline needed for hemostasis during biopsy procedures

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- Refrigerator/freezer not conveniently located near the procedure room

Solution

- Small fridge purchased for the procedure room
- Difficulty encountered with laboratory agreement to culture scope

Solution

- IP team collected specimen and lab agreed to process
We utilized the guidance document for culturing duodenoscopes to collect samples from the bronchoscopes.

https://www.fda.gov/downloads/MedicalDevices/ProductsandMedicalProcedures/RepocessingofReusableMedicalDevices/UCM597949.pdf
Takeaways

▪ IPs at facility have an excellent relationship with clinical personnel throughout the facility. That is very beneficial when these types of issues arise.

▪ There have been no new cases identified.

▪ Always be concerned when there’s water and/or ice utilized in a patient care setting.

▪ Find an environmental lab that you can utilize for this type of investigation.

▪ Walk the process! – see what’s going on at bedside
Outbreak Process

- **Outbreak Investigation**  GA DPH

- https://sph.unc.edu › 2015/08 › nci-ph-epitimeams-steps
Thanks for your attention. You can find more information on the Duke Infection Control Outreach Network at the link below.

- [https://dicon.medicine.duke.edu/](https://dicon.medicine.duke.edu/)