**CASE INVESTIGATION: HISTORY, CLINICAL EVALUATION, TREATMENT, OUTCOME**

**CASE INVESTIGATION RESULTS**

Prior to referral, some patients had diagnoses of viral hand, foot, and mouth disease; gastrointestinal illness; or atopic dermatitis. In 3 patients, mycobacterial culture was suspected, but ruled out, in patient with congenital heart disease. In 5 patients, mycobacterial culture was negative.

- **Location and Pain**: Patients reported hand and/or foot pain; most symptoms were not painful.
- **Time Between Exposure, Illness Onset, and Clinical Care**: 1 week to 13 weeks after exposure.
- **Clinical Care**: 7 patients had clinically-diagnosed mycobacterial skin infections.
- **Control Measures**: Patients were advised to wash hands with soap and water and to avoid swimming pools.
- **Treatment and Clinical Course**: 3 patients had limited disease, 2 patients had persistent disease, and 2 patients had severe disease requiring hospitalization.
- **Complete Resolution**: All patients had complete resolution of disease.

**Control Measures**

- **Personal Protection**: Use of personal protective equipment (PPE) during procedures, such as wearing gloves and face masks.
- **Environmental Measures**: Cleaning and disinfecting of the pool and surrounding areas.
- **Public Health Notification**: Notification of local health departments.

**MOLECULAR LABORATORY RESULTS**

- **Composite Analysis**
  - **Source**: Wading pool, Fountain strainer, Patient #1, Patient #2, Patient #3, Patient #4
  - **Organism Identified**: M. fortuitum, M. abscessus/chelonae

- **Sample Type**
  - **Sample**: Wading pool deck, Wading pool water, Decorative lining insert
  - **Organism Identified**: M. fortuitum, M. abscessus/chelonae

- **PFGE Type**
  - **Type**: M. fortuitum, M. abscessus/chelonae

**CONCLUSIONS**

- **An outbreak of M. abscessus skin infections among children was associated with exposure to a wading pool and controlled by environmental intervention.** Clinicians who identify patients with M. abscessus skin infections should ask about water exposures and contact their public health agency.
- **Limitations**: The study had some limitations, including the small sample size and the lack of control for confounding variables.

**ACKNOWLEDGMENTS / DISCLAIMER**

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**BACKGROUND**

- **Mycobacterium abscessus**: A rapidly growing, acid-fast bacteria (AFB) that causes skin and subcutaneous tissue infections.
- **BEAR**: Bacterial entrance, acid-fast stain (AFB), endocarditis, respiratory illness, and abscesses.
- **M. abscessus**: A rapidly growing, acid-fast bacteria (AFB) that causes rare skin and subcutaneous tissue infections.

**METHODS**

- **Case Investigation**: Included diagnostic laboratory testing.
  - **Skin biopsy**, **swab of exudate**, **Stimulated AFB Stain**, **PFGE**

- **Clinical evaluation**: Included diagnostic laboratory testing.
  - **Tissue biopsy**, **swab of exudate**, **M. fortuitum**

- **Molecular laboratory investigation**:
  - **Gene sequence analysis** for identification and relatedness studies.
  - **Pulsed-field gel electrophoresis** to identify clonal relationships.

**IMAGES OF LESIONS**

- Images of lesions associated with recreational water in the U.S.