Lobomycosis
Synonyms: Keloidal Blastomycosis
Lacaziosis

Definition
• Lobomycosis is a chronic fungal infection produced by various ascomycetes. It typically effects the exposed areas of the skin and the extremities.
• Most common species
  - Lacazia lobo
• Intracellular yeast, slow growing, rural and aquatic distribution

Causes
• Geography
• Skin trauma
• No predisposing factors have been identified to be a cause for lobomycosis (i.e. diabetes, human immunodeficiency virus)

Laboratory Aspects
Causative Agents
• Lacazia lobo
Virulence Factors
• Does not become a systemic fungal infection, but fungal cells can be found in proximal lymph nodes.

Epidemiology and Ecology
• Effects immunocompetent patients
• Wide distribution in South America
• Isolated cases in the United States, Canada, and in Europe
• More common in men (68-92% of cases) than in women
• Average age of infected patient: 38 years old
Forms of the disease
- Cutaneous lobomycosis
- Subcutaneous lobomycosis

Cutaneous Lobomycosis
- Shiny, atrophic, and discolored skin
- Lesions, papules, or plaques that are verrucoid and or ulcerative
- Lesions usually found on the arms, legs, face, or ears
- Lesions are typically burn and/or itch

Collections of tissue samples
- Cutaneous Lobomycosis
  - Tissue samples are typically obtained by curettage or surgical biopsy

Histopathology
- Tissue Stains
  - 10% KOH and Parker Ink
  - Gomori Methenamine silver stain
  - Periodic acid-Schiff stain
  (all used to demonstrate the yeast-like cells)

Identification
- Slow growing fungi
- Most likely reproduces through budding
- Spherical intracellular yeast that are remarkably homogenous
- Darkly pigmented fungal cells when GMS is used for staining

Treatment and Prevention
• Requires
  – Early diagnosis
  – Surgical excision
  – Oral clofazimine therapy
  – There is no current method known for preventing lobomycosis

Case Study 1
• 42 year old female
• Growth on posterior right upper arm
  – Dusky-red
  – Nontender
• Patient History
  – Geologist with previous travel to tropical disease-endemic regions
  – Current growth
    • Same site as previous excision attempt of similar lesion (2 years earlier)

• Biopsied tissue specimens of the lesion
• H&E stained tissue
  – superficial, and deep granulomatous dermatitis
  – multinucleated giant cells
• PAS and GMS stain
  – Spherical
  – Arrangement
    • single cells or in budding chains
    • joined by narrow bridges
• Calcofluor white stain of fresh tissue
• Tissue
  – spherical fungal organisms
  – arranged in chains

• Fungal morphology
– *Loboa loboi*

- Treatment
  – Lesion surgically excised

**Case Report 2**

- 42 year old white male
- Skin lesion
  – Appearance of keloid
- Mild itching
  – No pain or discomfort

**Exposure**

- Venezuela
  – Angel Falls
    • Walked under falls
    • Swam in river
  – Extremely high water pressures
- Mexico
  – Showering

**Histopathology**

- GMS staining used
- Histiocytes
- Multinucleated giant cells
- Scattered lymphocytes
- Infiltrate
  – Globose or subglobose lemon-shaped cells
- Treatment
  – Surgical incision

**References**

References continued