

# A CASE OF SUBCUTANEOUS ZYGOMYCOSIS

DR . SOWDESWARI  
DR . ANDAL  
DR . SENTHILGANESH  
KKCTH



## CASE HISTORY:

8 month male brought with complaints of,

- Swelling in the right gluteal region for 6 months
- Short febrile illness
- No other associated symptoms
- No history of any trauma or intramuscular injections in the past.



On examination,

General examination – well thriving child, had pallor  
Systemic examination was normal.

Local examination:

Multiple firm to hard non-tender swellings each measuring 6X8 cm noted in the right gluteal region, with minimal skin tethering, extending onto right inguinal region, normal overlying skin; no bony involvement



PROVISIONAL DIAGNOSIS:

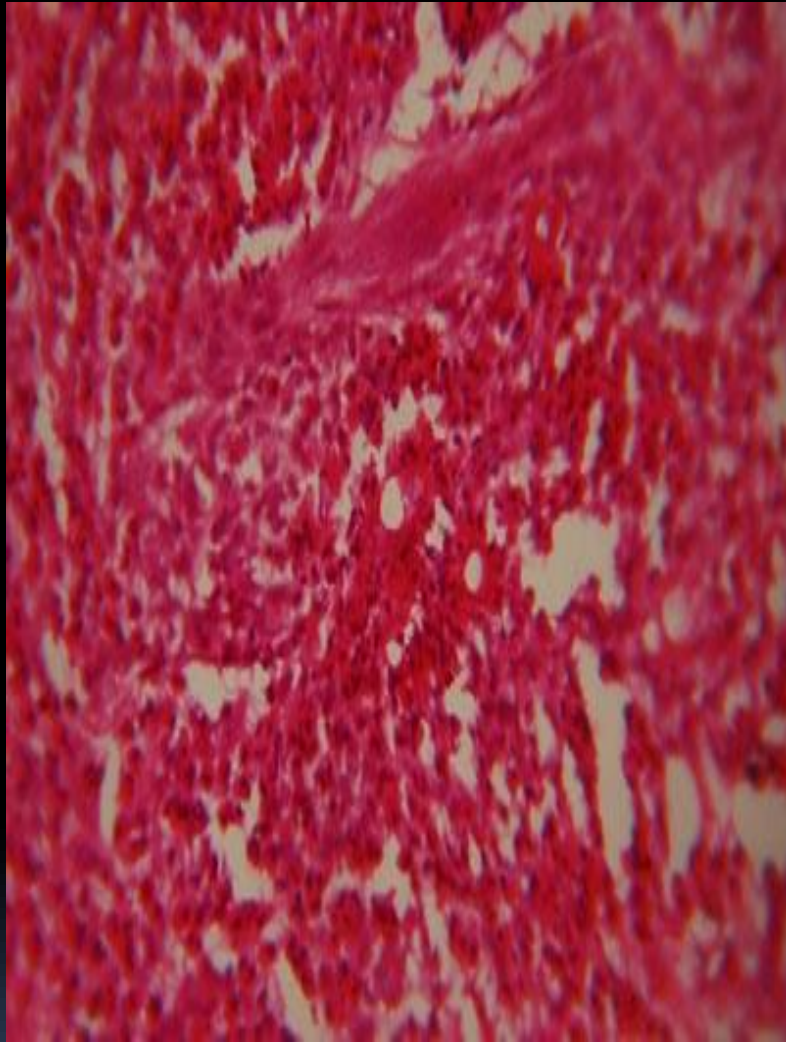
GLUTEAL FIBROMATOSIS OF HIP

## Investigations:

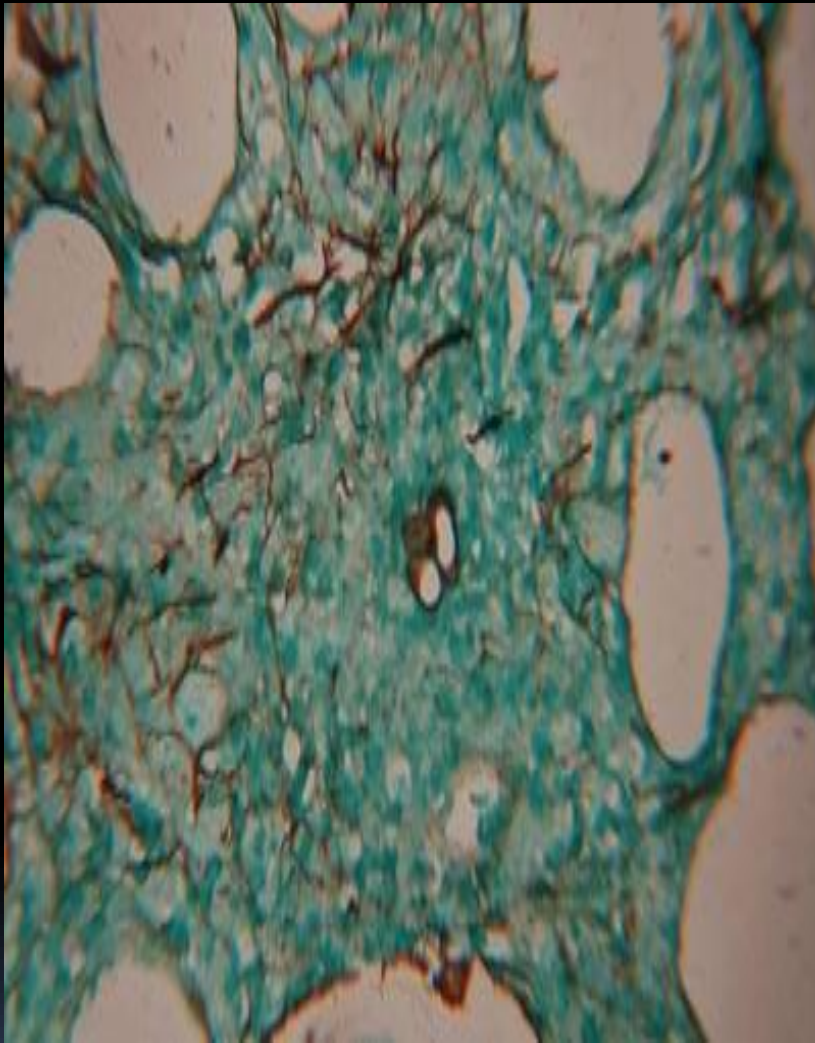
- Normal CBC except low Hb, CRP, RFT AND PT/PTT
- High ESR(70)
- Immunoglobulin profile normal except elevated IgE
- HIV non reactive
- Chest X ray and right thigh X ray were normal

## Treatment:

- Symptomatic with oral antibiotics
- Partial excision biopsy of the swelling



Multiple abscesses with a dense infiltrate of neutrophils, eosinophils and lymphocytes. There are several epithelioid granulomas with foreign body giant cells



Silver stain(GMS):

-Occasional giant cells showing broad, aseptate hyphae.



Imp:

Granulomatous inflammation of  
fungal origin.

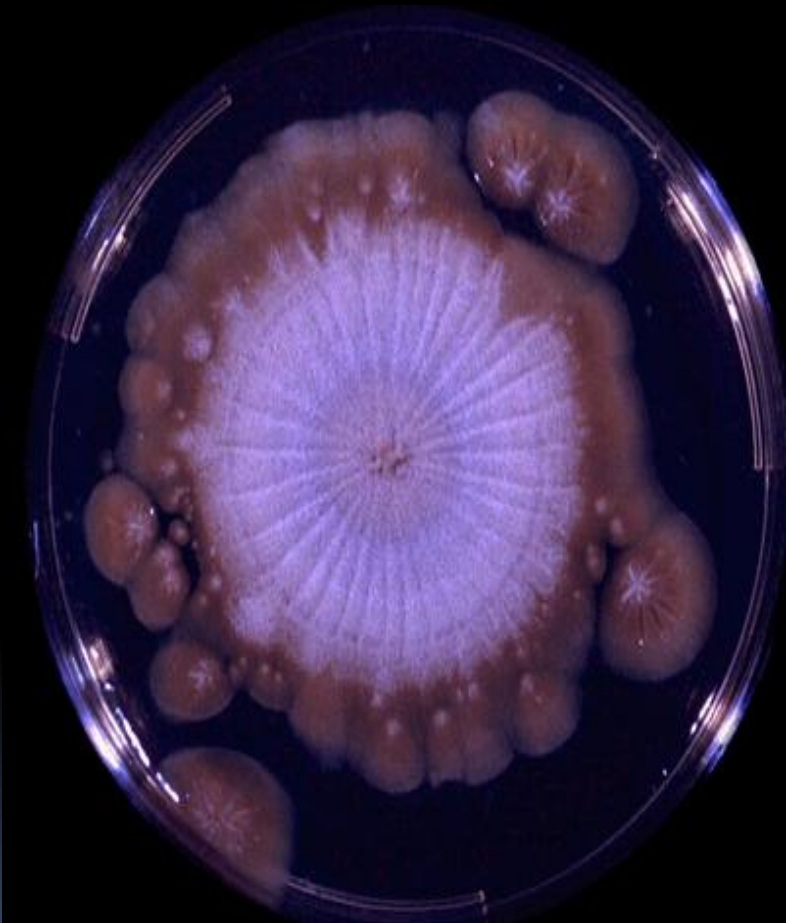


# Culture on sabaroud's agar



## Culture:

- 10%KOH – positive for fungal elements
- Growth of basidiobolus ranarum
- Furrowed, heaped up, creamy brown colonies, after 3 days incubation





Treatment:

Oral Potassium iodide – not palatable


Oral itraconazole – 1 month



Swelling completely resolved after treatment







# DISCUSSION

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- Basidiobolomycosis - Subcutaneous zygomycosis - Rhinoentomophthoromycosis
  - Subcutaneous phycomycosis was first described in Indonesia in 1956.
  - It is the commonest clinical form of Basidiobolomycosis, and is endemic in South India
  - Organism is common in soil, decaying vegetable matter, and the gastrointestinal tracts of amphibians, reptiles, fish and bats.

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- Children, less often adolescents and rarely adults are affected.
  - Commonly occurs in previously healthy individuals.
  - It can cause a variety of clinical manifestations including subcutaneous zygomycosis, gastrointestinal zygomycosis and occasionally an acute systemic illness. .
  - It is presumed that infection is acquired through exposure to *B. ranarum* following minor trauma to skin or insect bites.
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- Fluctuant ,firm and non-tender swellings, on the extremities, trunk and rarely other parts of the body.
  - The risk factors associated with gastrointestinal zygomycosis are Protein calorie malnutrition, diarrhea, typhoid fever, and gastric or intestinal ulcers and amoebic colitis etc. may present with abdominal pain, leucocytosis and eosinophilia.
  - Gold standard diagnosis is histopathology and culture.
  - Demonstration of the fungal elements with fungal specific stains such as calcuofluor white or GMS is recommended



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- Histologically, Basidiobolomycosis is associated with eosinophilic infiltration, which was also the case in our patient.
  - The other histological features are extensive dermal and subcutaneous fibrosis and large zygomorphic hyphae without septae. Some may be surrounded by an eosinophilic material which is called as 'Splendore – Hoepplie' phenomenon.
  - Culture on Sabouraud's dextrose agar and lactophenol cotton blue wet mount confirmed the diagnosis of Basidiobolomycosis
  - It is known to produce several enzymes, e.g. lipase and proteases; immunological tests also available




## TREATMENT:

- oral potassium iodide
- Oral Itraconazole

Duration:

21 days to 1 month

Other drugs:


- amphotericin B, cotrimoxazole, ketoconazole, and fluconazole
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- **First human culture-proven Australian case of entomophthoromycosis caused by *Basidiobolus ranarum*** [Medical Mycology, Volume 32, Issue 3 1994, pages 225 – 230](#)
- **Subcutaneous Phycomycosis in a 18 months old female child, painless, non-tender swelling on the thigh.** OJHAS Vol. 8, Issue 3: (2009 Jul-Sep)
- **A Maharaj Nakorn Chiang Mai Hospital from 1985 to 2001. Eight cases of entomophthoromycosis, five patients as subcutaneous zygomycosis, GI entomophthoromycosis and 2 rhinofacial zygomycosis.** J Med Assoc Thai 2002;85:1089-94

- **Subcutaneous zygomycosis caused by Basidiobolus haptosporus: presentation of a case mimicking Burkitt's lymphoma.** 1982 Mar;31(2):370-3, pub med, inf. dis
- **Basidiobolomycosis: A rare case report,**  
*Indian Journal of Medical Microbiology, Vol. 26, No. 3, July-September, 2008, pp. 265-267, AIIMS*
- *KAPLAN, KEMMLER et al TEXTBOOK OF PEDIATRIC INFECTIOUS DISEASES. VOL II*



## Conclusion:

- Youngest case reported so far
  - Though a rare entity, easy to treat.
  - Surgical debridement is not needed.
  - Complete resolution without any recurrence.
  - Atypical organisms or fungal infection in case of recurrence or persistence of the disease.
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THANK YOU