“I’ve got you, under my skin..” [and other places]

Brian Allred

1. ‘Norwegian’ scabies
- A parasitic infestation of the skin by the human mite Sarcopes scabiei resulting in an intensely pruritic eruption.
- 2 clinical manifestations described
- ‘Routine’ & ‘Norwegian’ scabies

‘Routine’ scabies
- Itching
- Due to delayed type-IV hypersensitivity reaction to the mite
- Severe and worse at night
- Secondary bacterial pyoderma, septicemia and poststreptococcal glomerulonephritis

‘Norwegian’ scabies (Scabies crustosa)
- Crusted scabies first described among leprosy patients in Norway 1848
- Also occur in AIDS, Lymphoma and Immuno-compromised patients
- Common in elderly in Rest Homes
- More infectious than ordinary scabies
- “Core transmitters”
- Remain infectious for long periods
- Progression from ordinary scabies to crusted is uncommon
• Begins with poorly defined red patches
• Quickly develops a prominent scale
• Scalp, hands and feet particularly susceptible
• Scales become warty, crusts appear
• Lesions malodorous and teeming with mites (1000s)
• Itching minimal or absent

Case study

• 88 year old male, admitted to Rest Home January 2008
• During 2008, Rest Home had known cases of Scabies. All patients treated
• Patient transferred to Rest Home Hospital December 2008
• Patient arrived with multiple skin conditions and wounds

• January 2009, MRSA isolated from unspecified wound swab
• Was placed in isolation
• January 2009, Hospital had 2 known cases of Scabies and all patients were treated
• No known source

• March 2009, Nurse noticed this patient had crusting between the webs of his fingers
• Patient complained of itchiness
• Crusting increased, Fungal infection queried
• 10\textsuperscript{th} March, Fungal scraping performed by Pathlab Nurse

• 13\textsuperscript{th} March, Head Nurse requested scraping on another patient
  • Result negative scraping
  • Despite knowing about the positive patient, treatment was not commenced
  • Treatment would be started the following Monday.
• Due to lack of treatment, Pathlab Microbiologist rang and spoke to the Manager
• Upon treatment of Lyderm, crusty lesions disappeared quickly
• Treatment repeated 4 times
• Patient died March 28th before 5th and final treatment
• During this time, 2 other suspected cases

• The Rest Home and Hospital have had sporadic outbreaks over the last 2 years
• The sources of these outbreaks haven’t been identified
• Patient has a daughter who visited regularly
• Hospital doesn’t know if the daughter treated herself and her family

Conclusion
• Serious institutional epidemics of scabies have resulted from failure to recognise the disease and take proper precautions
• Difficult to control scabies in Rest Homes due to reluctance in removing infected staff off rosters and properly washing bedding and clothes of infected patients
• Scabies contracted by healthy individual from contact with crusted scabies is no different from ordinary scabies

2. Botfly myiasis
• Myiasis – fly strike / blown
• Zoonosis predominantly – horses, cattle etc
• Humans – Dermatobia hominis (obligate myiasis)
• Phoretic transfer – intermediate vector e.g. mosquito, other mammalian blood sucker
• Geography – Central & South America, Africa

Animal Life cycle

Human life Cycle
Case study

• Specimen arrives in lab – Dr says...... ...“?nature of the beast”
• Patient - 54 year old female
• Clinical note – larvae migrans scalp

A closer look......dished up!

No – not Escargot!

The Bot fly

Dermatobia hominis

The Lesion – or one like it
The Patient

- Post ‘Adventure Tour’ in the Amazon
- Patient says….. “eggs laid in scalp by ?butterfly”
- More likely – mosquito?

Treatment

- Usually occlusion – vaseline etc to suffocate the larvae □ withdrawal, with aid of tweezers
- Other – ‘Tiger Balm’ & other camphorated ointments on bites, lighted cigarette etc
- Video - http://vimeo.com/4974886

3. ?Worm/Delusional parasitosis

- 17 Jan 2011, we received a urine pot containing 4 grain-like objects in formalin
- ?worm, found in faeces of 23m baby girl.
- White, quite hard, rice grain-like (slightly smaller).
- Pressed it with cover slip □ broke in half like a peanut. No structure visible under microscope.
- Didn’t feel like tissue.

Rice grains

- Lab received a complaint
- The mother of the child sent another spec to VET lab.
- Dog tapeworm segment found
- Patients family very upset!

Report

- The ?worms submitted did not conform to any recognized human parasite. Examination of the objects suggested something of vegetable origin e.g. rice grain-like…
Shock, Horror – urgent review

- The “rice grains” were sectioned in Histology department. Slides made
- Packets of ova typical of dog tapeworm *Dipylidium caninum* were seen

AMENDED REPORT

- The objects submitted are now identified as proglottids of *Dipylidium caninum*
- Apologies made for the incorrect previous report
- New procedure in place: histological examination on all unidentifiable objects submitted to Micro lab.
Life cycle

- Dogs are the principal definitive hosts; other hosts are foxes and cats
- Humans are accidental hosts, especially children
- May be infected by ingesting an infected flea, when playing with dogs and cats

SYMPTOMS

- Usually asymptomatic
- Abdominal pain
- Diarrhoea
- Itchy anus
- Urticaria

Conclusion

- Not a delusional parasitosis!
- Histological section technique proved to be useful for unidentifiable objects by routine microbiological methods
- None of our staff had seen these previously, and have all learned a great deal from this case

Thank you