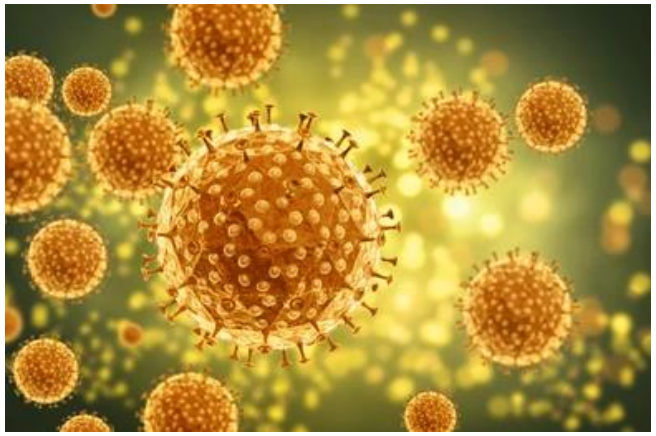


Microbiology Trainee Clinical Case Discussion Club

Session 4: Tuesday 13th June, 12:30-13:30 BST

Supported by:

The Association for Clinical Biochemistry
Microbiology Group

Housekeeping

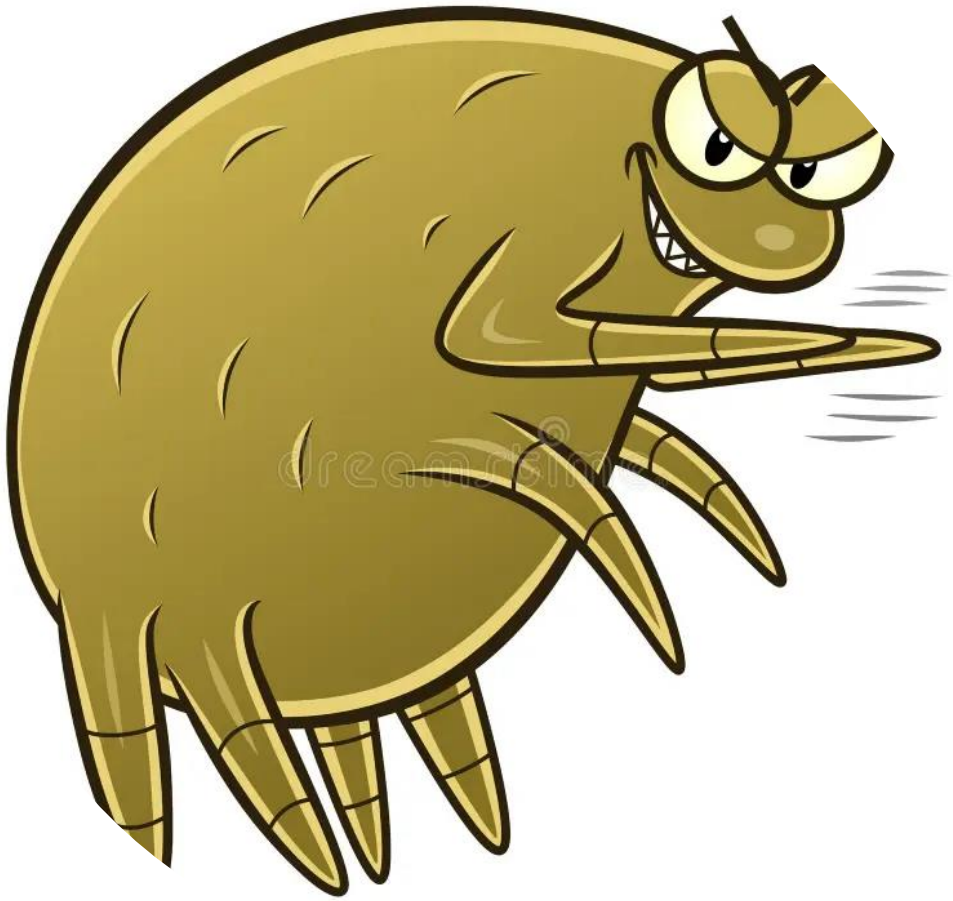
Cases involve real patients. Please do not divulge any patient identifiable information. The content of the session is strictly confidential.

Please keep your microphones on mute.

Post any questions in the chat. The session chair will ensure all points are covered.

When making a comment, please provide your reasoning! We are all here to learn from one another. There is no wrong answer.

Please engage with the session and enjoy.



This mite be a problem! Outbreak management

Sian Josse, Shahaan Shafiq

Lancashire Teaching Hospitals NHS Foundation Trust

Setting the scene…

Concerns raised by HCWs to Ward Manager on 17/5 regarding a cluster of patients and staff with rash of unknown cause.

Ward Characteristics:

- Neurological rehabilitation ward.
- 21 beds + 3 sole occupancy side rooms.

A list of suspected/possible cases was drawn up.

Cases

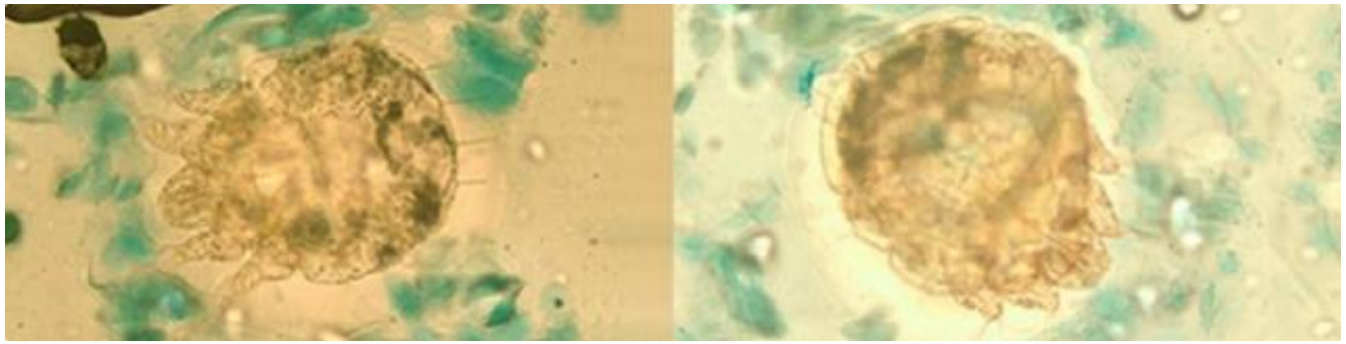
Patient #	Location	DOA	Symptoms
1	Ward Bay	5/5	Rash over lower back & buttocks since 7/5.
2	Ward Bay	15/2	Rash across abdomen since 23/5.
3	Side Room	13/5 (Transferred from BVH)	Long term rash on left shoulder. Medical team not convinced by appearance. Awaiting dermatology review.
4	Side Room	2/5	Rash under left arm noted 24/5. Previous rash to face.
5	Side Room	14/3	Extensive rash. Seen by dermatology, rash thought to be due to other medical condition(s).
6	Discharged	Not stated	Rash to back of shoulder. Seen by dermatology, Scabies NOT diagnosed.

Visitors (x2): Visitors for patient 5 presented with rashes 2 weeks prior. GP does not think rash is typical of scabies

Staff (x9): 3x Clinically confirmed as scabies by GP, 2x treated for possible scabies by pharmacist, 1x possible scabies (undiagnosed), 1x likely eczema, 1x ?infected insect bite, 1x undiagnosed rash on arm.

By 19/5, 3x HCW had Scabies diagnosis. The IPCT was consulted regarding a possible outbreak on the 23/5.

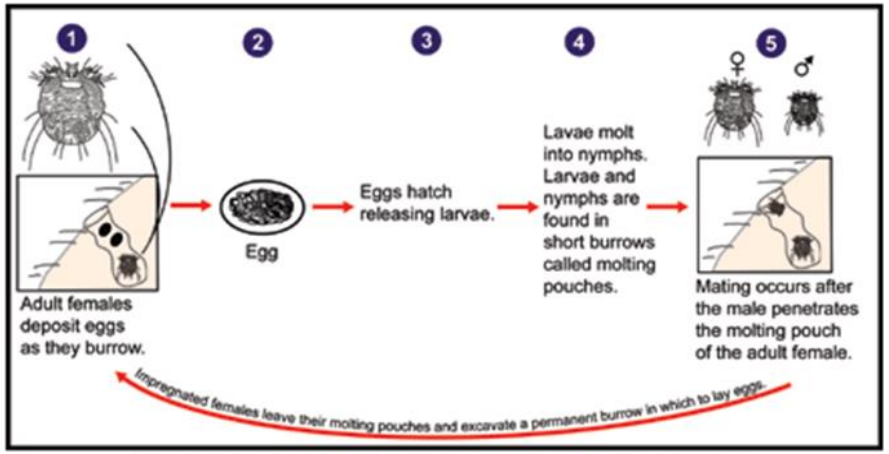
Scabies



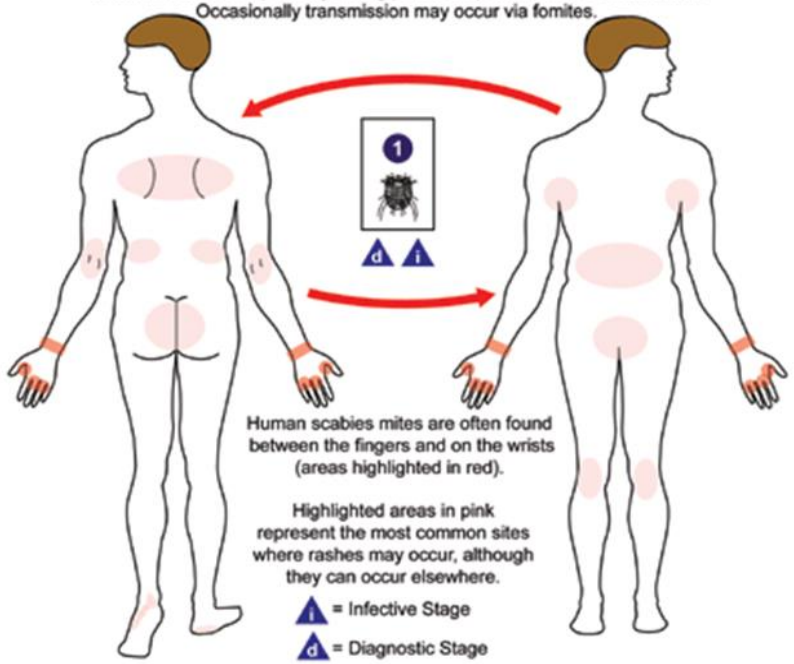
CDC: https://www.cdc.gov/parasites/scabies/index.html

- Agent: *Sarcoptes scabiei* var. *hominis*
- Parasitic infestation.
- Exclusively human pathogen. No animal or environmental reservoir.
- Scabies mite burrows into the upper layer of epidermis where it lives and lays eggs.
- Symptoms: Intense itching (pruritis), pimple-like rash.
- Transmission: Direct, prolonged skin-skin contact with infected individual. Indirect via clothing, bedding etc.
- Incubation: 4-8 weeks if naïve (may transmit prior to symptoms).
- More severe presentation = Crusted Scabies AKA “Norwegian Scabies” – seen primarily in immunocompromised populations.
- Diagnosis: Customary appearance and distribution of rash, can be viewed via dermatoscopy, presence of burrows (Ink test), Identification of mite, eggs or faeces by microscopy.
- Treatment: Topical scabicides e.g. permethrin cream.

Continued…



Transmission occurs primarily during person-to-person, skin-to-skin contact. Occasionally transmission may occur via fomites.



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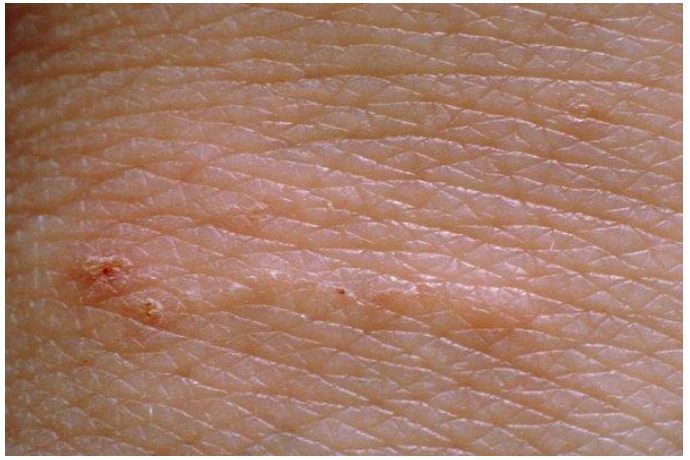
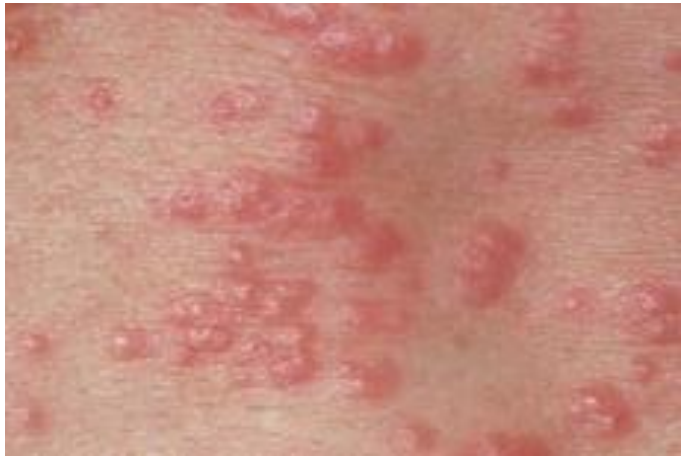
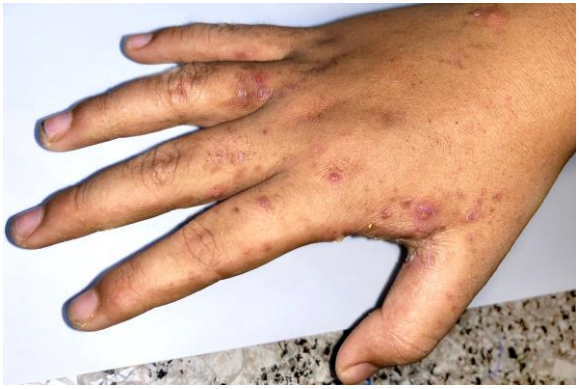






NHS: https://www.nhs.uk/conditions/scabies/

What is an Outbreak? Are we dealing with one?

- An incident in which **two / more people** experiencing a **similar illness** are linked in **time or place**.

Common hospital outbreaks include:

- Gastroenteritis (usually viral caused by Norovirus)
- Clostridium difficile infection (CDI)
- Methicillin resistant Staphylococcus aureus (MRSA)
- Multi-drug resistant gram negatives
- Influenza / other respiratory illnesses.

Are we dealing with an outbreak of Scabies? – POSSIBLY

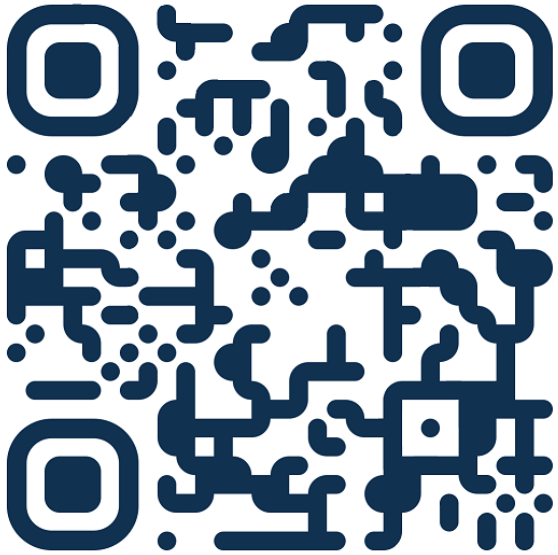
Next steps?

INFECTION PREVENTION CONTROL TO VISIT WARD

WARD TEAM TO EXAMINE PATIENTS AND STAFF FOR POSSIBLE SIGNS OF SCABIES AHEAD OF OUTBREAK MEETING

CONVENE OUTBREAK TEAM

https://www.mentimeter.com/



Who should be invited to an Outbreak meeting?

Menti Code: 3844 6179

Who should be invited to an Outbreak meeting?

- Director of Infection Prevention and Control (DIPC) or suitable deputy.
- Infection Prevention & Control Nurses
- Ward Manager
- Ward (Specialist) Pharmacist
- Public health representative?
- Occupational Health?
- Domestics?
- Estates?
- Press officer?

Based off the information we know at this stage – what initial actions would you put in place?

Actions Meeting 1

- Deep clean of the ward.
- Check the date of the curtains in the bays.
- Review storage of linen
- **Dermatology review 25/05 – Ward team to ensure all patients are seen.**
- DIPC to email minutes to dermatology ahead of review
- Any new staff with rashes to be directed to occupational health
- DIPC to share images of typical Scabies rash with ward team to aid case identification.
- All patients who are confirmed (or cannot be ruled out my dermatology) should be isolated.

Dermatology r/v

Patient #	Location	DOA	Symptoms
1	Ward Bay	5/5	Rash over lower back & buttocks since 7/5. **Dermatology r/v: linear deep excoriations on thighs, no mite identified to the extent examined. Scabies cannot be ruled out.**
2	Ward Bay	15/2	Rash across abdomen since 23/5. **Dermatology r/v: Examination revealed a widespread itchy erythematous rash. On dermatoscopy, burrows with scabies mites noted on abdomen (Delta Wing sign positive) – Confirmed Scabies.**
3	Side Room	13/5 (Transferred from BVH)	Long term rash on left shoulder. Medical team not convinced by appearance. Awaiting dermatology review. **Dermatology r/v: Erythematous papules on right shoulder, arm. Some of them are excoriated. Background of possibly prurigo since several years. Scabies could not be ruled out.**
4	Side Room	2/5	Rash under left arm noted 24/5. Previous rash to face. **Dermatology r/v: Rash on left axilla, does not appear to be scabies presently.**
5	Side Room	14/3	Extensive rash. Seen by dermatology, rash though to be due to other medical condition(s). **Dermatology review – Extensive bruising, excoriated papules, a few possible burrows. Strong possibility of ongoing scabies in this patient to be considered as daughter has an active burrow with mite on webspace of hand and granddaughter has an active itchy rash.**
6	Discharged	Not stated	Rash to back of shoulder. Seen by dermatology, Scabies NOT diagnosed.

Patient 5 Visitor (Daughter): **Dermatology review – daughter has an active burrow with mite on webspace of hand and granddaughter has an active itchy rash. Scabies confirmed.**

Staff: None of the staff had typical lesions of scabies. However, all three examined staff had excoriated papules on trunk and upper limbs. These could be **nonspecific signs of scabies.**

Discussion Meeting 2 25/05

- After dermatology review – 4 patients and 2 visitors have confirmed (or strong suspicion of) Scabies.
- None of the staff reviewed had typical scabies lesions however they showed excoriated papules on the trunk and upper limbs. (Non-specific signs of scabies).
- Reviewed current guidelines on scabies management.
- **Outbreak declared**

What are the next steps? What additional actions would you put in place?

Menti code: 3844 6179

Actions Meeting 2 (1)

- Treat all symptomatic patient and staff with two doses (one week apart).
- Administer one dose (prophylaxis) to all asymptomatic patients and staff who have had direct contact with patients.
- Treatment and prophylaxis should be **co-ordinated** so that it happens within a 48-hour period.
- Close ward to admissions until all patients and staff are 24 hours post prophylaxis/24 hours after 1st treatment dose.
- Discourage visiting before all patients and staff are 24 hours post prophylaxis. Any vital visitors should be made aware of the risk of close contact and be offered PPE (Apron and Gloves) which should be used appropriately.

Actions Meeting 2 (2)

- Visitors to be informed of Scabies risk. IF there has been skin-skin contact in a caring capacity, they should receive a dose of prophylaxis.
- Personal Protective Equipment (PPE): gloves and aprons must be worn for close contact with possible/confirmed infected patients and placed in clinical waste after use. Gowns on a risk assessment basis with infected patients if risk of skin-to-skin contact. Disposed of appropriately.
- Appropriate disposal and decontamination of linen*
- During the ensuring 6 weeks, observe for any further presence of scabies so that any possible cases can be dealt with promptly.
- The IPCT will inform the UKHSA and the community IPCT of the outbreak.
- DIPC to inform the press office in case there are enquiries.

Would you have done anything differently?

Menti code: 3844 6179

https://www.mentimeter.com/

What was the outcome?

Scabies Outbreak Outcome

Additional cases:

- No further patient cases identified.
- 1x Student with pustules between fingers. Had yet to return to work and will receive 2nd dose.
- 2x additional members of staff presented with symptoms. Excluded from work until assessed by GP.

- Treatment prescribed and administered in **coordinated** action. Symptomatic patients to receive 2nd dose 7 days post initial dose.
- Ward re-opened on 28th, 1-day post coordinated drug delivery.
- Visiting re-opened.
- Outbreak team to continue to monitor situation for 6-weeks.

Problems faced

- Stock issues relating to topical scabicides in community pharmacies due to high rates of community infection.
- Scabicides drugs not released OTC in a hospital setting – release of medication required written prescriptions.
- HCWs unable to get GP appointments for diagnosis leading to prolonged exclusion from work and enhanced staffing pressures.
- Logistics – Outbreak occurred over busy Bank holiday period & half-term. Staffing issues, senior pharmacists on AL.
- Lack of an updated trust policy on managing a Scabies outbreak.

Problems faced

- Who is responsible for diagnosing Scabies infections and coordinating prophylaxis for staff?
- Occupational health?
  - Lack of experience in diagnosing Scabies
  - Doesn't fit into their remit as our OHD is outsourced – no guidance in their Service Level Agreement?
- Dermatology?
  - Services too stretched to provide a routine diagnostic service
  - However, dermatology expertise required for correct diagnosis

➢ Slowed down identification of outbreak, and extended time before treatment administered

➢ DIPC had to prescribe prophylaxis for all staff

UKHSA Guidelines for management of Scabies in closed settings

- Closed settings such as care homes, prisons, long-term hotel/hostel etc
- Recommend two doses of treatment, 1 week apart. Must be done at same time as index case even if asymptomatic.
- Contact tracing for 8 weeks prior to scabies diagnosis.

What we did

- Much more complicated in hospital settings due to potential exposure of larger numbers of people
  - Current patients, discharged patients, staff (including BANK staff), domestics, visitors etc
- We recommended staff only receive one application of treatment due to the numbers involved (over 100 staff recommended for treatment) and published efficacy data for single dose regimen.
- **Additional complication:** upsurge of scabies cases regionally in care homes making it difficult to source treatment from community pharmacies.

- Several other hospital infection control policies advise a single dose of permethrin for contacts, but an additional dose for those with symptoms.
- A study (Usha & Nair, 2000) found a single application of Permethrin was superior (effective in 97.8% of patients), compared to a single dose of Ivermectin (70% effective) which increased to 95% after two doses

Lessons learned

Any Questions?

Call for presenters

Please contact: Callum Goolden - callum.goolden@lthtr.nhs.uk if you have a case you would like to present at subsequent sessions.

Requirements:

Presenting trainees must be accompanied by a suitably qualified (FRCPath) colleague to provide clinical oversight.

Please ensure that cases are forwarded to the session chair in advance to facilitate any necessary formatting.