Tinea corporis
Ringworm

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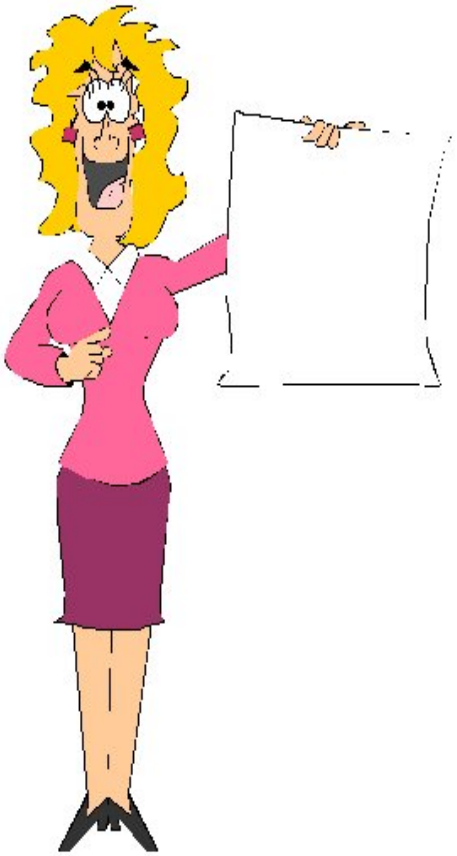
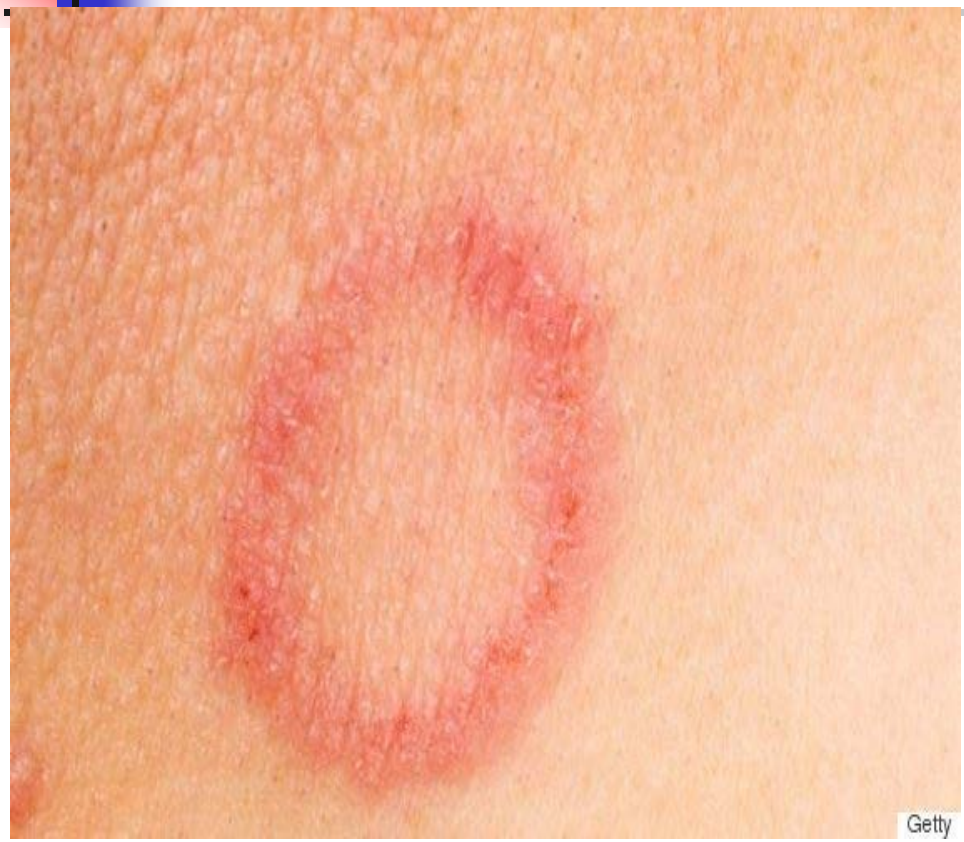
Aims and objectives



To be aware of:

- The value of listening to the patient
- The importance of history taking
- The value of physical examination
- How to nail the diagnosis
- How to work within scope of practice
- Determining treatment options
- The value of nurses practicing at advanced level

Clinical presentation



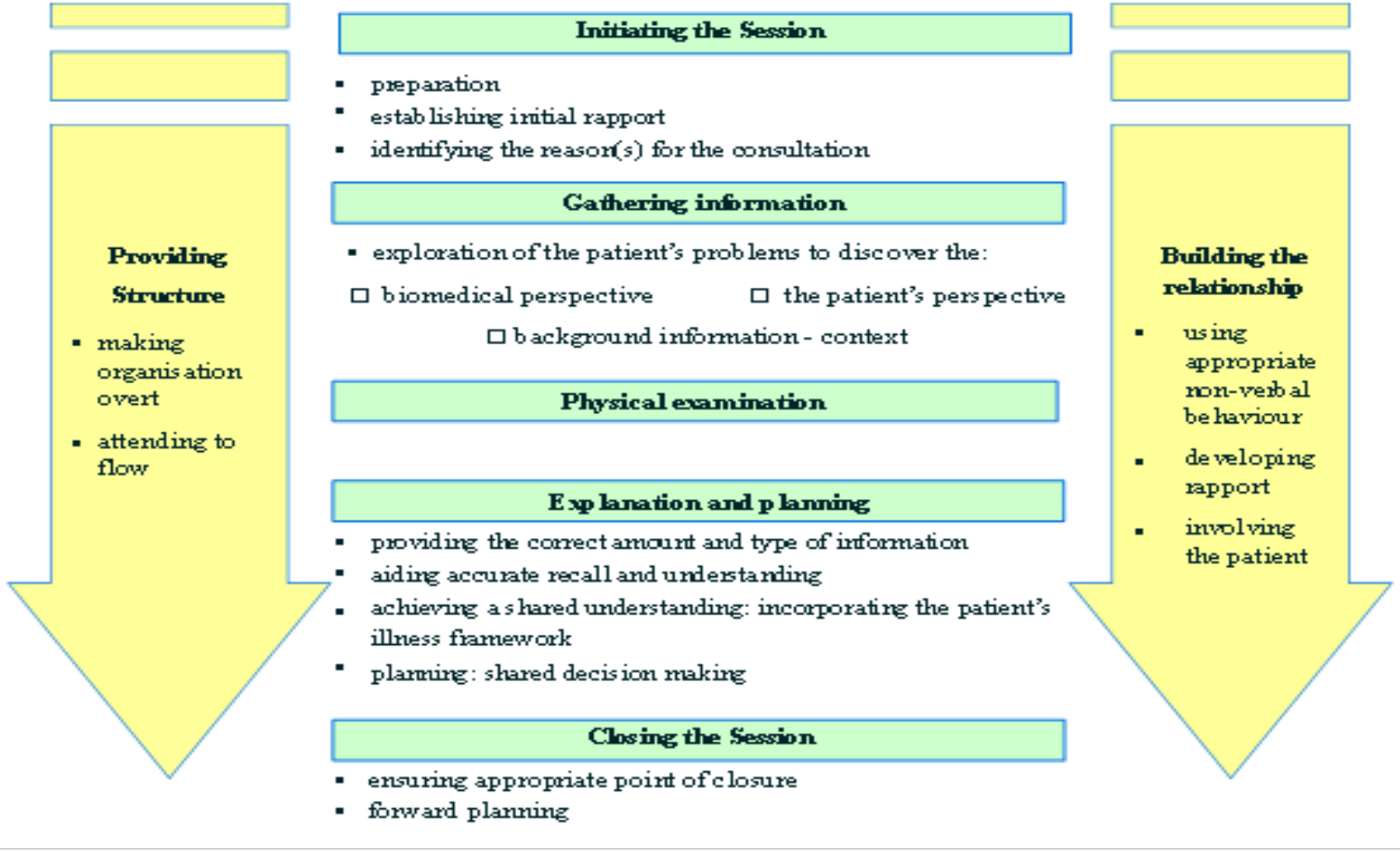
26 year old single woman

Extensive red rash

Intense itch.

Feels “like a freak, all my friends think this is contagious”

Calgary- Cambridge Model



Formulating the diagnosis

Medical and social history

- Single.
- Living at home with parents and younger sister
- Works as a teaching assistant
- Normally fit and well.
- Currently being treated for ringworm
- Has had ringworm before.

Presenting problems

- **Red itchy rash**- getting worse not better.
- **Difficulty sleeping “**because of the itch”
- **Has to wear long sleeves** – to cover up

Miss Richards' perspective

- " I keep getting this"
- "I've had it on and off over the last two years "
- " It always flares up in the summer and I have to cover up"
- "It usually clears up with cream but then it comes back. I wonder if I'm having the right treatment."

Miss Richards' hopes and aspirations

" I want to get this sorted out once and for all".

Physical examination

All systems other than skin = normal

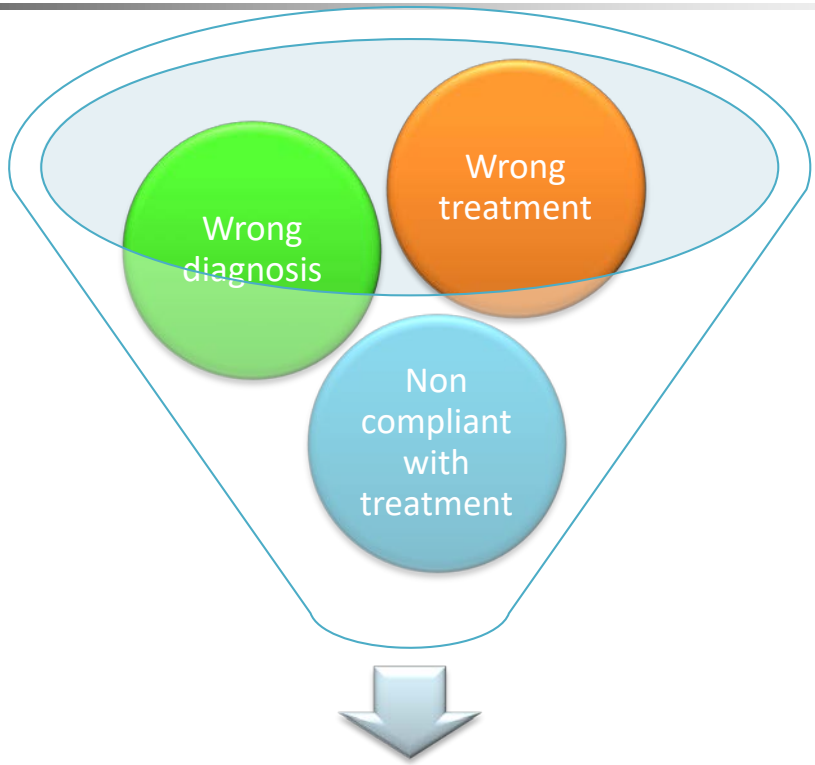
Trunk, back and arms were covered in erythematous scaly papules. These were annular (ring shaped) with raised borders and the skin in the centres of the lesions was normal.

Rash was less marked on the trunk and forearms and more marked on the back which is more difficult to reach

Observations of temperature, pulse, blood pressure, pulse, respirations, and 02 saturations were within normal limits.

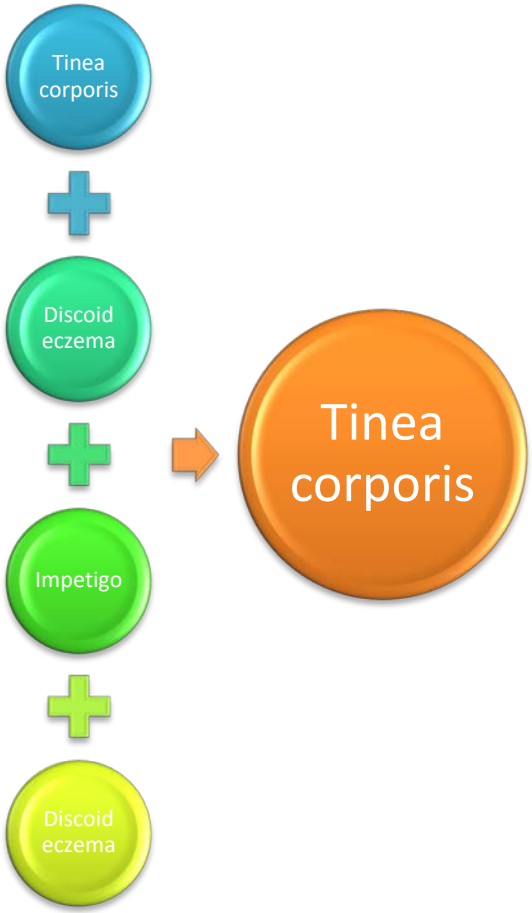
Weight 52kg. BMI 20.

Why isn't the treatment working?



No improvement

Check differential diagnosis

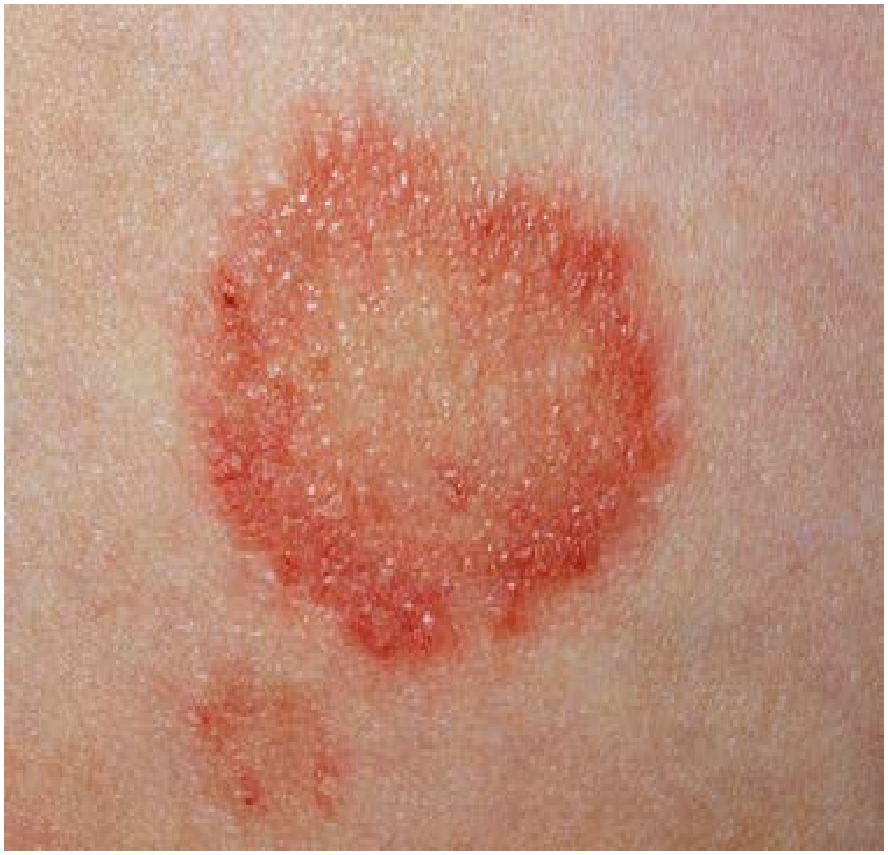


Differential diagnosis- tinea corporis

History and clinical examination suggest that she has tinea corporis (ringworm) but other possible causes include:

- Impetigo a common acute bacterial skin infection mainly affects the face and hands, *but* can affect trunk, perineum and other body sites. It presents with single or multiple, irregular crops of irritable superficial plaques. These extend as they heal, forming annular or arcuate lesions
- Discoid eczema is a common type of eczema. There are scattered round shaped patches of eczema and the person can experience intense itching. Severe discoid eczema can have a similar appearance to tinea corporis however in tinea corporis the skin at the centre of the lesion looks normal.
- Psoriasis is a chronic inflammatory skin condition. There are clearly defined, red and scaly plaques (thickened skin)

Impetigo



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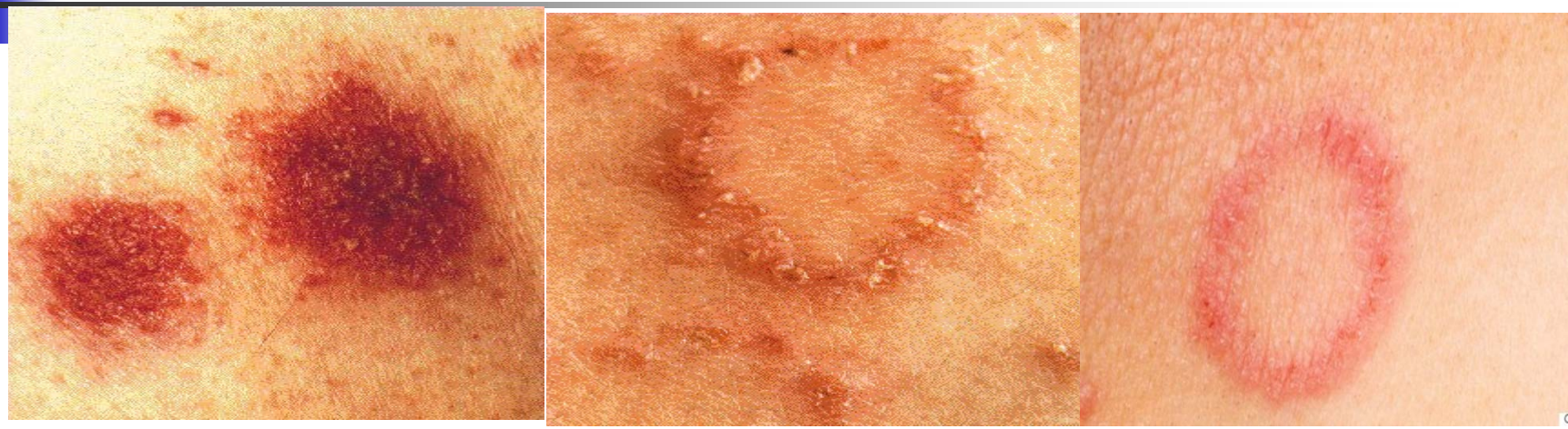
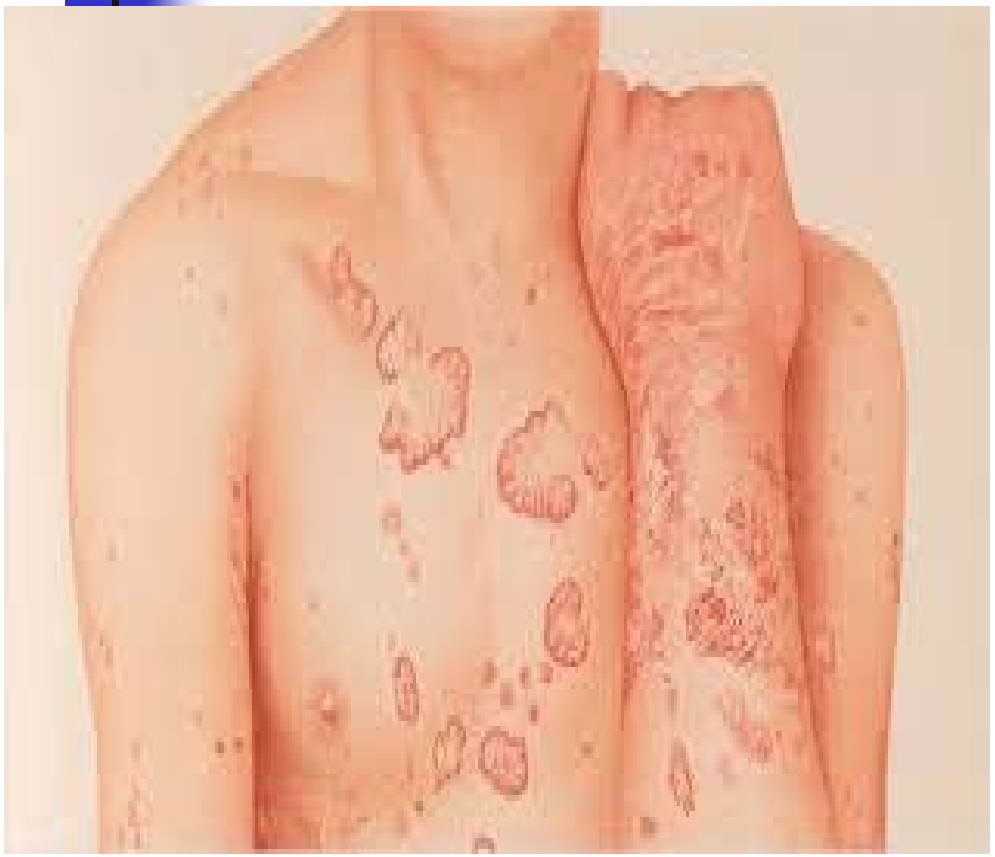
Discoid eczema



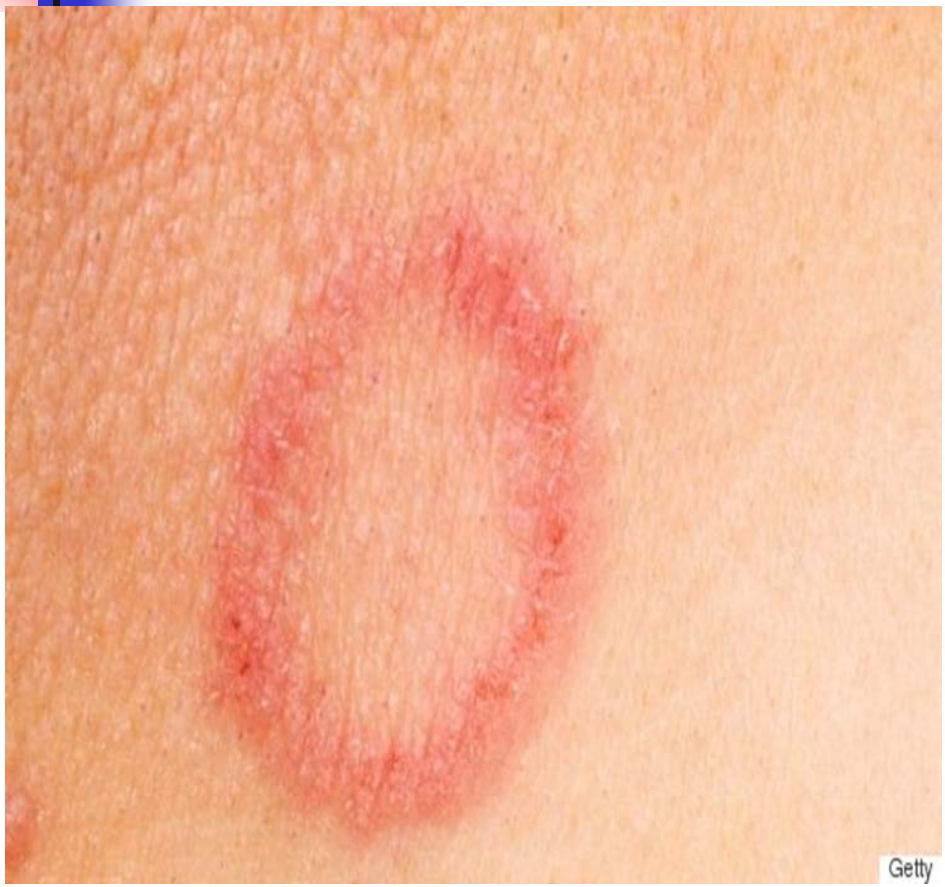
- Discoid eczema is a common type of eczema. There are scattered round shaped patches of eczema and the person can experience intense itching. Severe discoid eczema can have a similar appearance to tinea corporis however in tinea corporis the skin at the centre of the lesion looks normal.
- Left – right 1st –discoid, middle discoid, last tinea corporis

Psoriasis



- Psoriasis is a chronic inflammatory skin condition. There are clearly defined, red and scaly plaques
- Psoriasis can at first glance appear similar however the scaly plaques and the absence of a normal skin in the centre of the lesion make it easy to differentiate.

What is tinea corporis?



- Tinea corporis (ringworm) is skin infection caused by a dermatophyte fungus. The dermatophyte fungus invades the keratin of the stratum corneum Common causative dermophytes are:
- Tinea. rubrum,
- Tinea. Tonsurans
- Microsporum. canis

Diagnosis

- Usually based on history and clinical examination
- Microscopic examination of skin scrapings mixed with potassium hydroxide.
- Cultured skin scraping results may take 2-4 weeks.
- On occasion skin biopsy of lesion may be required

Transmission

- Direct or indirect contact.
- Person to person = anthropophilic infection
- Direct contact with an animal = zoophilic infection. Microsporum canis is passed on from cats & dogs
- Indirect contact via contact with contaminated clothing or bedding

Treatment options

Topical antifungals twice daily for 10 days	• Clotrimazole, econazole, ketoconazole or miconazole after washing and drying skin. Start outside rash and work inwards
Topical antifungal daily for 7 days	• Terbinafine less commonly used, great care in pregnancy and breast feeding.
Oral antifungals avoid in breast feeding	• Terbinafine 250 mg daily for 4 weeks or itraconazole 200 mg daily for 1 week
Antihistamines	• To treat itching if required

Previous treatment of tinea corporis

- Clotrimazole – 14 days, no resolution.
- Miconazole – 14 days no resolution.
- Currently – 10 days of terbenafine – no improvement.
- Right diagnosis, right treatment
- Do we have a compliance issue?

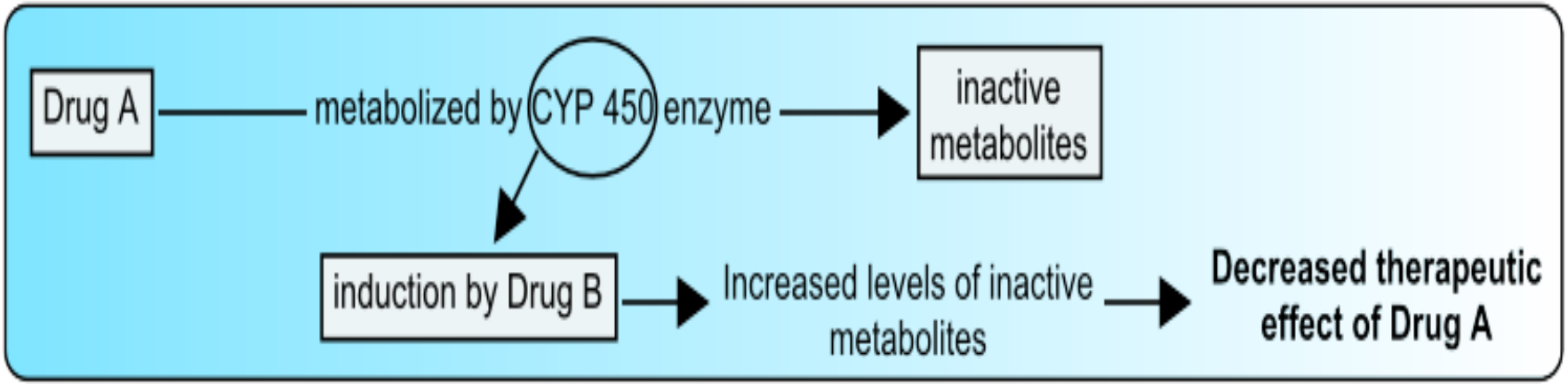
Compliance?

- Rash less marked on easy to reach areas
- Denies difficulty reaching her back
- “Not always easy to find time to apply cream”
- “Might have been a bit slapdash”
- Not keen on tablets if needed short course and as few as possible

Treatment options

- Terbinafine 250 mg daily for 4 weeks
- Itraconazole100mg daily for 15 days or 200mg daily for seven days.
- Seven day course shortens duration of therapy and reduce the risks of missed doses.
- *Antihistamines for relief of itching*

Itraconazole - an enzyme inducer



- Can affect plasma concentrations of drugs including oral anticoagulants, CYP3A4 metabolised calcium channel blockers such as dihydropyridines and verapamil and certain glucocorticosteroids such as budesonide, dexamethasone, fluticasone and methylprednisolone

Itraconazole cautions

- Women of childbearing potential taking Itraconazole capsules, should use contraceptive precautions.
- Effective contraception should be continued until the menstrual period following the end of Itraconazole therapy (EMC, 2016)

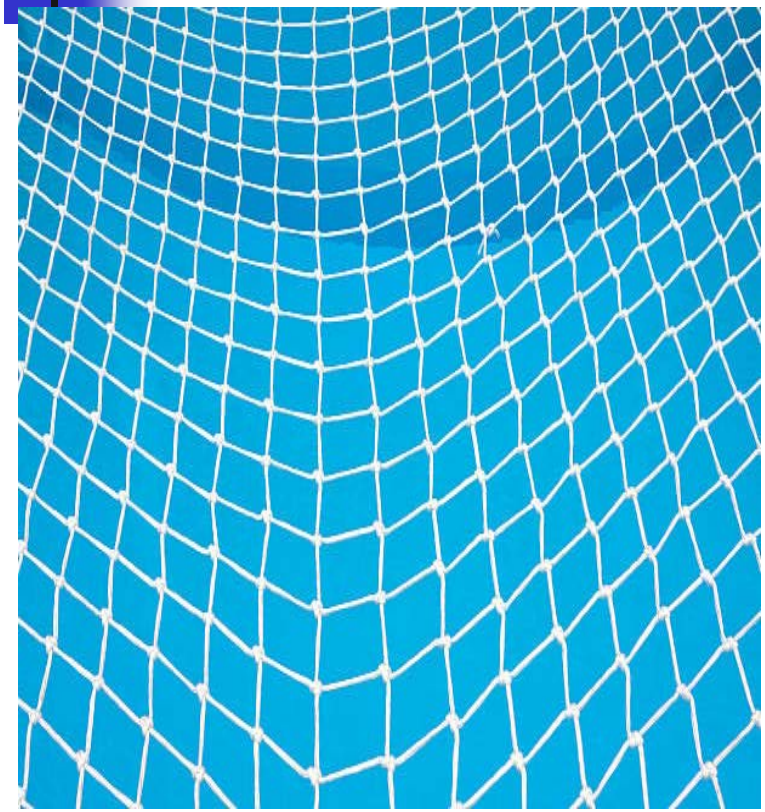
Itraconazole cautions

- Itraconazole not recommended in older people with heart failure and chronic lung diseases e.g. COPD.
- Should be used with great caution in renal impairment
- Generally avoided with hepatic impairment.
- Interaction with anti-psychotics

Balancing treatment and mental health

- Likely to need additional treatment for psychosis
- Long weekend approaching
- Discussion with consultant and defer treatment till after holiday
- Documentation of decision making

Safety netting



- Advised to use effective contraception if having sex.
- Advised that hepatitis is a rare side effect of Itraconazole. If develops any signs of loss of appetite, fatigue, nausea, vomiting or dark urine to seek urgent medical advice.
- Advised that chlorpheniramine maleate can cause drowsiness & if affected she should not drive or operate machinery.
- Arranged to review Miss Richards in a week.

Infection control issues

- Contaminated clothing or bedding can potentially cause reinfection
- Inpatient setting treat bedding as infected.
- At home not to share towels, flannels or a bed & to launder any clothing, towels and bedding the individual has used separately on a hot wash.

Patient progress

Responded well to oral Itraconazole

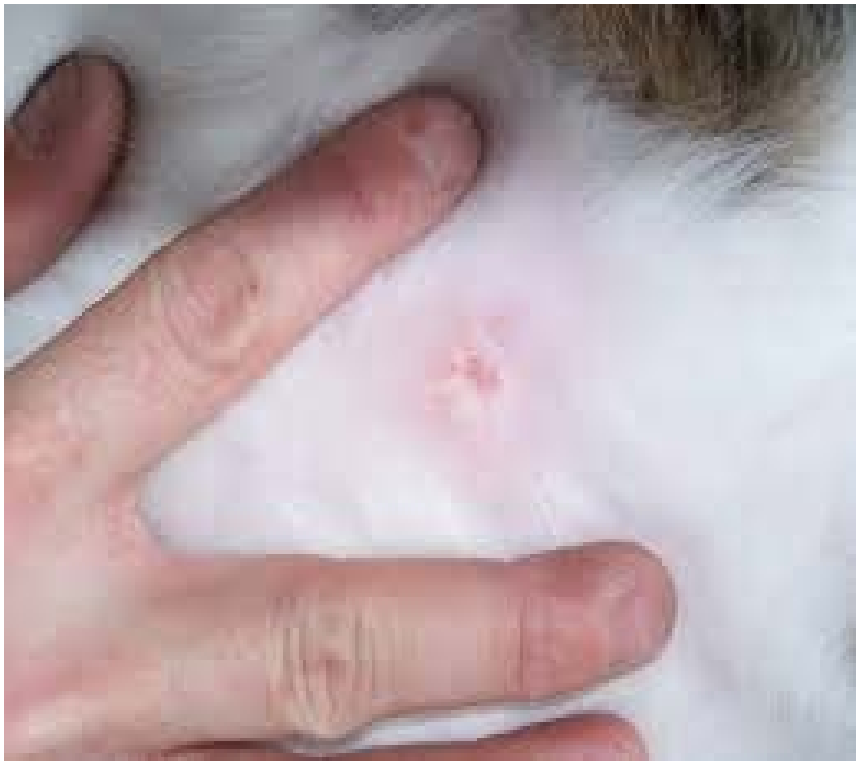
Two weeks post treatment

Fully recovered and wearing a crop top !

Do you treat cats?

- Cat has a similar rash
- Is Sophie re-infecting the cat?
- In the summer Sophie wears crop tops & cat sits on Sophie’s lap.

Cat treatment

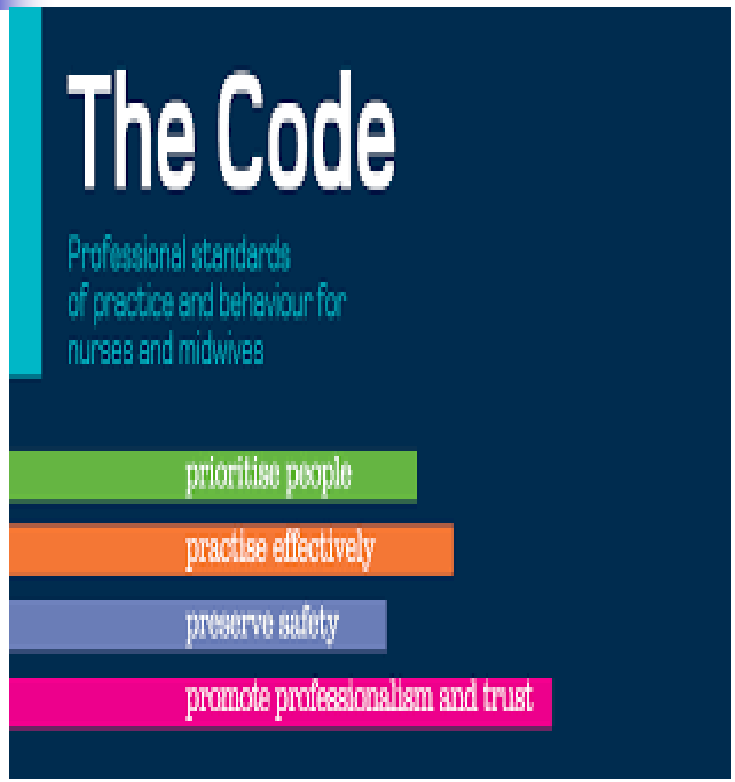


- Advised to consult vet
- Cat currently being treated with “left over” antifungal creams
- Responding well

How vets treat cats

- Wood's lamp
- Shampoo
- Cream
- Oral medication
- + Infection control measures
- NB this is not within our scope of practice as NMPs

Scope of practice



- The nurse is not a vet!
- The nurse is required to work within the limits of competence and make a timely and appropriate referral to another practitioner when it is in the best interests of the individual requiring care and treatment

Take home messages

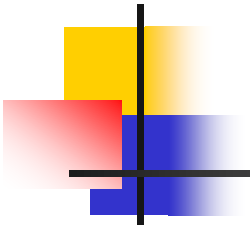
- Likely cause of reinfection - cat
- Direct contact with an animal = zoophilic infection. Microsporum canis is passed on from cats & dogs
- Summer time crop tops and cat snuggling = mode reinfection
- If cat is treated (by a vet) removed vector of transmission
- Clinicians should be alert to complications, work within their sphere of competency and refer appropriately.

The value of advanced practice

Nurses practicing at advanced level:

- Raise the bar for all nurses
- Are able to see, diagnose and treat
- Are registered, educated and accountable
- Reduce pressures in acute and primary care
- Improve quality of care

Our challenge is to have our skills recognised and valued at all levels from secretary of state to the patient



Thank you for listening

Any questions?