



# The Weekly Probe

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## THIS WEEK

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## LAST WEEK'S CASE - KERION

4yo boy presents with malodorous ulcerated scalp lesion which has progressed despite 5 days of oral cephalixin. On exam – afebrile – raised ~ 10X 8 cm area of friable, ulcerated skin. The hair falls out when the lesion is cleaned. What is going on?



It was thought that the boy had a kerion which is a abscess caused by a fungal infection (esp Trichophyton and Microsporum) and the subsequent inflammatory response. It is most commonly found on the scalp (tinea capitis) yet can occur anywhere.

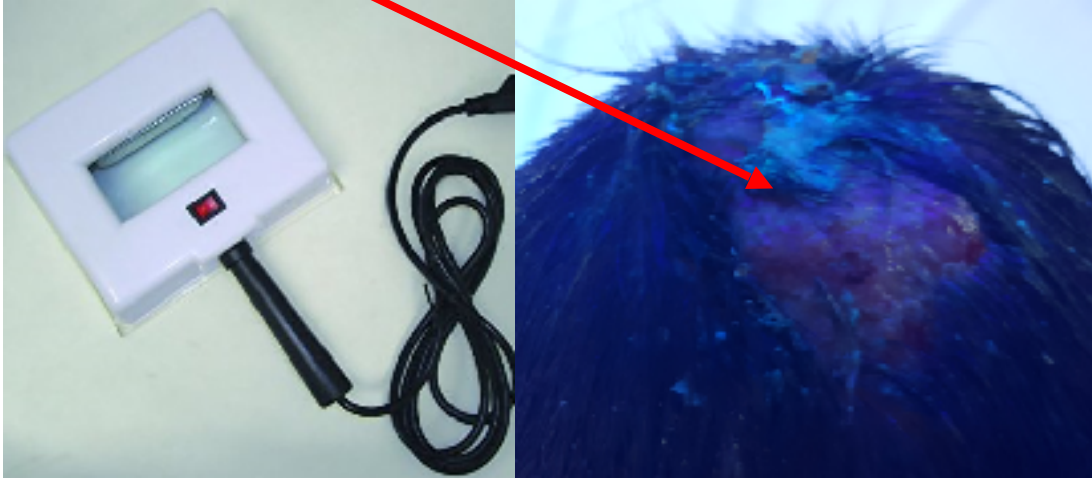
A kerion presents as a boggy pus-filled lump, often several cm in diameter. It is characterised by marked inflammation. Hairs within the kerion are loose and fall out, often resulting in localised alopecia- this may be persistent. .

With the local inflammation there may be systemic features of fevers and local adenopathy. Apparently it may also be followed by a widespread pruritic eczema-like rash (dermatophytide-allergic reaction to fungal rash at a remote site)..

### How is kerion diagnosed?

- Scrapings and hair samples may be taken from the affected area for microscopy and fungal culture .

- Woods lamp which emits a wavelength UVA may reveal yellow-green (note that Uptodate note blue-green- in this case more blue than green!) fluorescence if kerion is due to *Microsporum canis*. This is often negative even when this is the responsible organism because the inflammation obscures the presence of the fungus.



- (it will cause coral red fluorescence in erythrasma, a inguinal scaling eruption caused by *Corynebacterium* and if you are looking for some real “zebras” the urine will fluoresce in porphyria cutanea tarda).
- A bacterial swab should be considered as secondary infection with bacteria is common.

**Is kerion contagious?** Yes- disinfect shared hairbrushes or combs. Treat other infected family members or pets.

**What is the treatment of kerion?**

Topical agents are not effective due to hair follicle invasion so use oral antifungals for **6-8 weeks** – terbinafine, itraconazole or griseofulvin.

Oral antibiotics may be required if there is secondary infection.

**Progress-** the bacterial culture grew a sensitive *Staph aureus* (probable secondary infection) – the initial stains for fungi were negative yet the culture grew ***Microsporum gypseum*** – a fungus found largely in soil yet can also be transmitted by animals and flies!

Ref- [www.dermnet.org.nz](http://www.dermnet.org.nz)

## DERMATOLOGY NOMENCLATURE – how do I describe that rash?

This is a topic we have covered before here’s something worth repeating considering the frequency of cases see in the ED (and the constant need to remind myself) . This is a reminder on how to describe common skin lesions. 1cm seems to be the magic number in dermatology now

Lesions	Description
<b>Flat lesions</b>	
Macules	A well-delineated, <b>flat</b> discolouration of the skin <1cm + - of any colour.
Patch	A well-delineated, flat discolouration of the skin >1cm of any colour.
<b>Elevated lesions</b>	
Papule	An <b>elevated</b> solid lesion up to 1cm in diameter; colour varies; papules may become confluent and form plaques. Can be flat topped, dome shaped or umbilicated- may be associated with secondary features such as crusts or scales
Plaque	A circumscribed, elevated, superficial, solid lesion more than 1cm in diameter, often formed by the confluence of papules
Nodule	A circumscribed, elevated, solid lesion more than 1cm in diameter; Same as papule but deeper involvement in the dermis or subcutaneous tissues- a large nodule is referred to as a tumour (yet does not imply that all tumour are neoplastic so choose your words carefully so you don’t scare the sh..t out of the patients).
<b>Clear, Fluid filled Lesions</b>	
Vesicle	A circumscribed collection of free fluid up to 1cm in diameter

**Bulla** A circumscribed collection of free fluid more than 1cm in diameter  
**Pustule** A circumscribed collection of leukocytes and free fluid (ie pus- yet may be sterile eg pustular psoriasis) that varies in size

**Deposits of Blood**

**Petechiae** A circumscribed deposit of blood less than 1cm in diameter  
**Purpura** A circumscribed deposit of blood greater than 1cm in diameter

**Miscellaneous**

**Scales** Excess dead epidermal cells that are produced by abnormal keratinization and shedding- involves the epidermis' horny layer – which has nothing to do with Shamus' nickname. Desquamation occurs when there are peeling sheets of scale following acute injury to the skin.

**Crust** A collection of dried serum and cellular debris; a scab

**Erosion** A focal loss of epidermis; erosions do not penetrate below the dermoepidermal junction and therefore heal without scarring

**Ulcer** A focal loss of epidermis and dermis; ulcers heal with scarring

**Fissure** A linear loss of epidermis and dermis with sharply defined, nearly vertical walls

**Burrow** Linear lesions produced by the infestation of skin and formation of tunnels by scabies mites or cutaneous larva migrans

**Atrophy** Thinning or absence of the epidermis or subcutaneous fat.

**Telangiectasia** Permanent dilatation of superficial blood vessels in the skin and may occur as isolated phenomena or as part of a generalized disorder, such as ataxia telangiectasia.

**Lichenification** Thickening of the epidermis seen with exaggeration of normal skin lines. It is usually due to chronic rubbing or scratching of an area

**Excoriations** Traumatized or abraded skin caused by scratching or rubbing.

**eschar** Hard plaque covering an ulcer implying extensive tissue necrosis, infarcts, deep burns, or gangrene

**Wheal** A firm oedematous plaque resulting from infiltration of the dermis & epidermis with fluid; wheals are transient and may last only a few hours – includes urticaria. (Angioedema is caused by the same or similar pathologic alterations as urticaria but it involves the deep dermis and subcutaneous tissue. An area involved with angioedema therefore has swelling as the prominent manifestation, and the appearance of the skin itself may be normal. Because angioedema occurs in deeper skin layers, where there are fewer mast cells and sensory nerve endings, the lesions have little or no associated pruritus, and the swelling may be described as painful or burning. Urticaria may occur on virtually any part of the body, whereas angioedema (in the absence of hives) often involves the face, tongue, extremities, or genitalia. In contrast to other forms of oedema, angioedematous swellings do not characteristically occur in dependent areas, are asymmetrically distributed, and are transient.

**Description**

**Annular** Ring shaped eg tinea corporis

**Discrete** Tend to remain separate.

**Clustered** Those that are grouped together eg herpes simplex or insect bites

**Confluent** Join or run together

**Dermatomal** Lesions follow a dermatome eg zoster.

**Follicular** If involving hair follicles

**Guttate** Nothing to do with the size of the persons girth but the lesions look as though someone took a dropper and dropped this lesion on the skin eg guttate psoriasis.

**Iris or Target lesions** Central colour change

**Koebner phenomenon** Appearance of lesions along a site of injury.

**Linear lesions** Occur in a line or band-like configuration.

**Multiform lesions** variety of shapes.

**Reticular** (net-like lesions) - seen in a variety of circumstances; e.g., very commonly in newborns as cutis marmorata, or with livedo reticularis

**Serpiginous** Wander as though following the track of a snake.

**Scarlatiniform** Has the pattern of scarlet fever- innumerable small red papules that are widely and diffusely distributed. May = Scarlet fever yet patients with a variety of other conditions such as Kawasaki disease, viral infections, or drug reactions may have rashes with the same pattern

Morbilliform	A rash that looks like measles - macular lesions that are red and are usually 2-10 mm in diameter but may be confluent in places. Seen in measles + Kawasaki's, drug reactions, or other conditions.
Satellite Lesions	Often used to describe candidiasis in which a beefy red plaque may be found surrounded by numerous, smaller red macules located adjacent to the body of the main lesions.
Nummular / discoid	Rounded or oval shaped
Acral	Means it affects distal portions of limbs (hand, foot) and head (ears, nose).
Erythroderma	When a skin condition affects the whole body or nearly the whole body, which is red all over
Flexural	distribution involving the flexures, i.e. the body folds- also known as intertriginous distribution

## JOKE / QUOTE OF THE WEEK

The police came to my front door the other night holding a picture of my wife.

The Constable said, "Is this your wife sir?"

Shocked I answered, "Yes".

They said, "We're afraid it looks like she's been hit by a bus."

I said, "I know, but she has a lovely personality & she's good with the kids."

Please forward any funny and litigious quotes you may hear on the floor (happy to publish names if you want)

### THE WEEK AHEAD

*Tuesdays - 14:30 – 15:30 Intern & JMO teaching -Thomas & Rachel Moore*

*Wednesday- 0800-0900 Critical Care Journal Club. ICU Conf Room / 14:30 – 15:30 Intern & JMO teaching -Thomas & Rachel Moore*

*Thursday 0730-0800 Trauma Audit. Education Centre / 0800-0830 MET Review Education centre / 1300-1400 Medical Grand Rounds. Auditorium.*