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Self-assessment on dermatology

1. A 6 year old child presents with multiple papules in his scalp, the scalp is scaly and there are broken off hairs noted. He has a few posterior occipital lymph nodes palpable. What is the most likely diagnosis?
 - a. Alopecia areate
 - b. Psoriasis
 - c. Impetigo
 - d. Tinea capitis

2. What test would be most helpful in making the diagnosis?
 - a. Complete blood count
 - b. Culture from a papule
 - c. KOH test of skin scraping
 - d. Histopathology of a skin specimen

3. A 3 year old child comes with a large boggy swelling on their scalp. There is inflammation and pus although the child seems relatively well in himself. Lymph nodes are palpable. How is this child best managed?
 - a. Incision and drainage then oral antibiotics
 - b. Oral cloxacillin 125mg qds for 7 days
 - c. Oral griseofulvin 20mg/kg/day for 6 weeks
 - d. Topical selenium sulphide shampoo twice weekly 4 weeks

CORRESPONDENCE •

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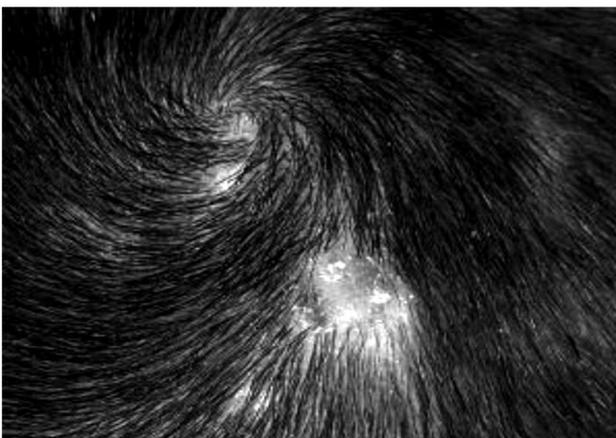
Tinea capitis is a common superficial fungal infection (genera: trichophyton and microsporum) of the skin of the scalp, involving the hair follicles and shaft.

It has a range of clinical presentations, some of which can be mistaken for bacterial conditions due to the severity of the inflammation. Clinical presentation of *Tinea capitis* depends on interaction between the host and the etiologic agents.



Picture 1

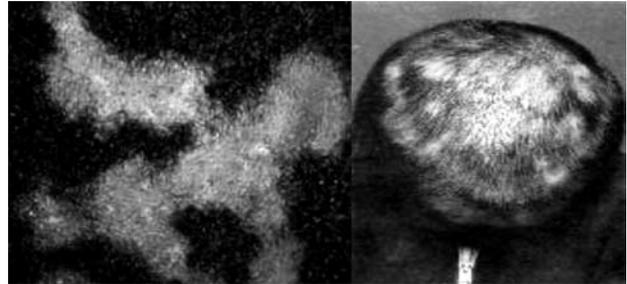
1. The child in the picture (Picture 1) has grey patches with scaling of the skin. The hairs in this area are broken and shorter. There is no inflammation, but there are papules at the base of the hair shafts which slowly spread outwards.



Picture 2

2. Pustules with inflamed crusts, exudates, matted infected hairs, and debris may be seen (Picture 2).

3. Black dot *Tinea capitis* refers to an infection where the hair shaft breaks off, leaving the infected dark stubs visible (Picture 3 and 4).



Picture 3

Picture 4



Picture 3

4. Kerion celsi may progress to a patchy or diffuse distribution and to severe hair loss with scarring alopecia. The patient will usually have enlarged, tender posterior occipital lymph nodes. This is often mistaken for a bacterial infection and inappropriately treated (Picture 5).

Tinea capitis lesions are mainly found in the scalp but may also extend to the eyebrows. Occasionally there is an immune response to the fungus that results in intensely itchy papular lesions occurring on palms and soles, the helix of the ear or on the trunk of the body. These lesions do not contain any fungus. Their appearance may be precipitated when the patient begins antifungal treatment.

Generally tinea infections are only slightly itchy, but sometimes can become severely pruritic.

Transmission is usually by person to person contact. The fungus survives a long time in combs and on bed sheets.

Common differentials would include:

- Seborrhoeic dermatitis
- Psoriasis
- Alopecia areata
- Impetigo

Both seborrhoeic dermatitis and psoriasis cause scaling of the scalp, but there is not usually any hair loss. In alopecia areata, there is not usually any scaling of the scalp. It can be hard to differentiate between impetigo of the scalp and an intense inflammatory reaction to fungal infection. Tinea capitis is usually less painful.

Investigation

There are some very simple tests which can be done to confirm whether this is a fungal infection or not. Skin scrapings from the scalp, including infected hairs and broken off hair stubs should be collected and softened in 10-20% potassium hydroxide (KOH) before examination under the microscope. If a tinea infection exists you will normally see fungal hyphae.

Conventional sampling of a kerion can be difficult and negative results for fungus are common. The diagnosis is therefore often made clinically.

Treatment

Topical treatment is not effective in the management of tinea capitis. The traditional treatment which remains very

effective is 6-8 weeks of oral griseofulvin, at a dose of 20mg/kg/day. Griseofulvin can cause nausea and rashes in 8-15% of patients and is contraindicated in pregnant women, as well as in men intending to father a child in the next 6 months.

Newer alternatives to griseofulvin include itraconazole and fluconazole. These are often more expensive but have the advantage of being used for a shorter time period. The dose of fluconazole in adults and children is 6mg/kg/day for 20 days.

Prevention issues

Tinea capitis is an infectious disease, and the child's siblings, parents and friends all need to be examined to make sure they are not asymptomatic carriers. If carriers are not treated then the whole process will start again.

Carriers should be treated with an oral antifungal agent like griseofulvin for 6 weeks, as well as a shampoo such as selenium sulphide or povidone-iodine twice weekly for 15 minutes for 4 consecutive weeks.

Children should be discouraged from sharing combs and hair brushes.

REFERENCE

<http://emedicine.medscape.com/article>