

Common scalp disorders in general practice

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Introduction

Scalp diseases are common in both children and adults. They can occur as primary scalp diseases, such as tinea capitis, traction alopecia, folliculitis keloidalis nuchae, and folliculitis decalvans, or as part of a generalised skin disease, like atopic dermatitis, seborrhoeic dermatitis, psoriasis, lichen planus, pityriasis rubra pilaris, and secondary syphilis. Scalp disorders can be non-scarring and reversible, while others can cause scarring, and are often permanent.

Primary scalp disorders

Tinea capitis

Tinea capitis is a dermatophyte infection of the scalp, and commonly occurs in children. The incidence among adults is low.¹ Common causative fungi are *Trichophyton violaceum*, *Trichophyton tonsurans*, and *Microsporum canis*.²

These fungi invade hair follicles and hair shafts. The clinical presentation depends on the type of hair invasion, level of host resistance, and the degree of inflammatory host response. However, the cardinal features are round areas of partial hair loss, with inflammation.² In severe cases, swollen boggy scalp lesions, called kerions and regional lymphadenopathy, occur (Figure 1). Although tinea capitis is a clinical diagnosis, laboratory methods can be performed to confirm the diagnosis. A simple side-room test involves scraping out scales from the lesion onto a glass slide, adding a few drops (10%) of potassium hydroxide (KOH), warming with a Bunsen burner, and looking for hyphae and spores, under a light microscope. Alternatively, the sample can be sent to a mycology laboratory, but this takes longer, and is costly.

The mainstay of treatment for tinea capitis is griseofulvin 20 mg/kg orally, daily, for three months.³ Topical therapy is not indicated, but frequent shampooing may help to remove matted crusts.



Figure 1: Tinea capitis, with kerions and cervical lymphadenopathy

Traction alopecia

Traction alopecia is a frequent cause of hair loss in women. It results from the tension caused by procedures intended to straighten kinky hair, e.g. hair weaving and braiding. Usually, the diagnosis is simple, provided the possibility of this as a cause of alopecia is kept in mind.⁴

Folliculitis decalvans

Folliculitis decalvans is a heterogeneous group of syndromes, in which clinically evident chronic folliculitis leads to progressive scarring.⁴ The exact cause is unknown. It occurs in both sexes, and typically affects women aged 30-60 years, and men from adolescence onwards.⁴ Clinical manifestation is a central patch of scarring alopecia, sur-rounded by crops of follicular pustules, with destruction of such follicles (Figure 2).



Figure 2: Folliculitis decalvans. Note the follicular pustules and scarring alopecia

Staphylococcus aureus may be cultured from the pustules. Treatment of folliculitis decalvans is difficult. Affected patients should be examined for underlying immune response defects, as well as leukocyte function. Pus swabs should be collected for microbiological examination. Topical and systemic antibiotics are the mainstay of treatment. They can inhibit extension of the disease, but only for as long as they are administered.⁵

Folliculitis keloidalis nuchae

Folliculitis keloidalis nuchae is a chronic inflammatory process, that affects the hair follicles of the nape of the neck.⁶ The cause is unknown. In-growing hair following close shaving, and bacterial folliculitis, have been postulated as possible causes. The disease is 10 times more common in males than females, and predominantly affects males of African ancestry.⁷ The disease starts as papules and pustules, which may coalesce into plaques, and heal with small, or large, keloids, on the nuchal area (Figure 3a, Figure 3b). Lesions may extend to the occipital scalp.

A recent study by Khumalo et al in Cape Town showed that folliculitis keloidalis nuchae is associated with the risk of bleeding from haircuts. This raises a concern about the potential transmission of blood-borne infections.⁷

Treatment of folliculitis keloidalis nuchae is notoriously difficult. The evidence of many of the management recommendations is weak.⁸ Early disease, with papules and pustules, may be treated with topical antibiotics, oral antibiotics, intralesional corticosteroid injections, or destruction of firm papules with cryotherapy. Once lesions have progressed to hypertrophic scars and keloids, surgical excision may be considered.



Figure 3a: Folliculitis keloidalis nuchae



Figure 3b: Close-up view of the same patient, showing keloidal scarring

Scalp disorders in generalised skin diseases

Atopic dermatitis

Atopic dermatitis is a chronic, relapsing inflammatory disease of the skin, characterised by dry, itchy skin, and typical distribution on the elbows and knees in younger children, and on the cubital and popliteal fossae in older children and adults.⁹

In the majority of patients, it often manifests in early childhood. About 50% of patients are affected in the first year of life, and a further 15% in the first five years of life.⁹

Clinical presentation varies with the age of the patient. Clinical features include erythema, oedema, vesiculation, crusting, dryness, scaling, excoriations and lichenification.⁹ In patients under six months of age, the face and scalp are the most commonly affected. Infants may present with yellow crusts on the scalp, called cradle cap.¹⁰ Pruritus is a chief symptom, and may be troublesome.



Figure 4: Seborrhoeic dermatitis, with severe scalp involvement

Treatment of atopic dermatitis is beyond the scope of this article. However, if the scalp is affected, the application of liquid paraffin, to remove scales and crusts, may be needed. In older children and adults, regular shampooing should be conducted, and corticosteroid scalp lotions applied.

Seborrhoeic dermatitis

Seborrhoeic dermatitis is a chronic dermatitis, featuring erythematous sharply marginated lesions, covered with greasy-looking scales. It is mainly distributed in areas with a rich supply of sebaceous glands, namely the scalp, face, neck, sternal and interscapular areas, the inframammary folds in females, the axillae, and the groin (Figure 4).

There may be patches on the scalp, or the disease may be confluent, affecting the whole scalp, and extending beyond the frontal hairline.¹¹ The disease occurs in both infants and adults. The infantile form is characterised by large, yellowish scales, mainly on the scalp, face, and nappy area, and is usually self-limiting. Infantile seborrhoeic dermatitis is less pruritic, and affected infants eat and sleep well, and not as irritable as those with atopic dermatitis. This points towards a diagnosis of seborrhoeic dermatitis, as opposed to atopic dermatitis.¹²

Cradle cap

Cradle cap refers to almost any situation in which there is thick adherent scaling of the scalp during infancy. In particular, it occurs on the vertex during the first few weeks of life, and is believed to represent persisting vernix.¹³ The associated rash starts on the scalp. There is relatively little inflammation. Opinions differ as to whether it is a form of infantile seborrhoeic dermatitis, or



Figure 5: Scalp psoriasis

infantile atopic dermatitis, or a different clinical entity. Treatment encompasses frequent application of olive oil or liquid paraffin, and that of emulsifying ointment, left for several hours, and then rinsed with water. The use of shampoos in infants and neonates is discouraged because of the danger of percutaneous absorption.

Psoriasis

Psoriasis is a common, genetically determined, inflammatory, and proliferative disease of the skin, characterised by silvery-white, scaly plaques on the skin, including the scalp.¹⁴ Exacerbating factors are infections, drugs, alcohol, smoking, stress and immunosuppression. Clinical variants of psoriasis are plaque psoriasis, inverse psoriasis, pustular psoriasis, and guttate psoriasis. In some patients, the scalp may be the only site affected. In such an instance, it is referred to as scalp psoriasis (Figure 5). Scalp psoriasis presents with thick scaly plaques, which may be diffuse, and involve the whole scalp.

Treatment of psoriasis depends on the age, clinical type, extent of the disease, and availability of resources. Scalp psoriasis is treated with polytar shampoo, and potent corticosteroid scalp and calcipotriol applications. Systemic treatment is usually reserved for extensive, severe disease.

Pityriasis rubra pilaris

Pityriasis rubra pilaris (PRP) is a keratinisation disorder, characterised by follicular keratosis and palmoplantar keratoderma. It affects males and females equally. The classical adult onset type starts most often on the head, neck, or upper trunk. Typical lesions are erythematous perifollicular papules, with a central keratotic plug. Lesions occur singly, but may coalesce into groups.¹⁵



Figure 6: The affected scalp of a patient with pityriasis rubra pilaris. Note the erythema and scaling

The scalp shows diffuse bran-like scaling (Figure 6). A biopsy of the skin is essential, to differentiate PRP from similar conditions, like eczema and psoriasis. The use of emollients to restore the disrupted skin barrier is important in the treatment of PRP. Topical and systemic steroids are ineffective.¹⁵ Retinoids, like acitretin, are the most effective treatment for PRP. About 80% of cases resolve spontaneously within three years.¹⁶

Pityriasis amiantacea

Pityriasis amiantacea presents with thick, asbestos-like (amiantaceous) shiny scales on the scalp.¹⁷ Dark grey crusting may be localised or generalised over the entire scalp (Figure 7). Masses of adherent scales overlap, and adhere to the scalp, and attach in layers to the hair shafts.

Pityriasis amiantacea may occur as a complication of seborrhoeic dermatitis, psoriasis, or lichen simplex. Some cases were found to be due to severe, untreated tinea capitis, or staphylococcal infection. The underlying cause needs to be treated, but thick, adherent crusts must be dissolved with keratolytic creams, liquid paraffin, and regular shampooing.

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Figure 7: Pityriasis amiantacea. Note the thick, dark grey scales

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