

Tinea Capitis

1 Introduction

1.1 Purpose

This clinical guideline is to enable patients from a refugee background to receive appropriate screening and treatment for Tinea Capitis within a primary care setting where appropriate. Importantly, it includes consideration of access to pharmaceuticals under the Pharmaceutical Benefits Scheme (PBS).

2 Clinical Guideline

2.1 Background

Tinea capitis is a dermatophyte (parasitic fungal) infection of the scalp, hair follicles and hair shafts. The majority of those presenting with tinea capitis will be children^{1,2,3,4,5,6} and this is a condition that occurs in Australian and refugee populations. A study from W.A. found that 9.1% of children referred to refugee health clinic had tinea capitis.⁷

There are a number of different dermatophytes that cause tinea capitis worldwide, some anthropophilic and some zoophilic. Distribution of dermatophytes varies across countries and locations², however, they are mostly seen in warm, humid environments.⁸ There has been a recent change in the epidemiology of these dermatophytes, with increasing incidence evident.^{2,8} The immunological state of the host and the causative species of dermatophyte often determine the severity of the disease.³ In Central and West Africa, *Trichophyton soudanense*, *T. violaceum*, *T. tonsurans* (anthropophilic dermatophytes) are possible causative organisms.^{4,9} If left untreated it can cause kerion formation (characterised by boggy tender plaques and pustules) and eventually scarring with permanent alopecia.⁵ Severe infection can be associated with cervical and occipital lymphadenopathy, fever and leucocytosis.⁵ This organism has been reported among African immigrants in Europe, North America, Australia and New Zealand.^{1,8,10}

2.2 Management

Prior to treatment, it is advisable to take scrapings from the scalp in case response to treatment is poor as it is difficult to get a positive culture once treatment has commenced. It may also be of use in cases with atypical clinical presentations.^{3,11}

If there is a kerion then it should be treated with oral antifungals for at least 4 weeks. It is reasonable to use griseofulvin initially⁶ and there is no need to do pretreatment LFTs although many patients will already have this in their routine screening.

2.3 Dosage

- Children 20mg/kg /day once daily
- Adults 500mg once daily.

Griseofulvin is bitter tasting, and patients should be advised to take it with milk or peanut butter to improve absorption.⁵ Parents should be advised about and asked to report symptoms of hepatic toxicity (e.g., abdominal pain, anorexia, nausea, vomiting, jaundice).⁵

FBC is reasonable to consider if prolonged treatment is expected, but is not normal practice.

It is useful to use topical Lamisil treatment as adjunctive treatment.

Selenium sulfide shampoos used concomitantly for the first two weeks may reduce transmission of infection early in treatment.⁵ Shampoo should be applied for 5 to 10 minutes, three times a week, for two to four weeks.⁵ Headwear, pillows, combs and hairbrushes should be considered as possible reservoirs of infection^{3,9} and patients advised to clean and avoid sharing them until the completion of 14 days of treatment.⁵

If the kerion appears resistant to initial doses and the treatment has been well tolerated (at review at one month) then it may be necessary to continue treatment for another 2-4 weeks.

During treatment, women should be advised to avoid pregnancy with non- hormonal contraception during treatment and for 1 month afterwards.

Men should be advised to avoid fathering a child for six months following treatment as studies show that it causes aneuploidy.

Patients should be followed up when treatment is completed, or sooner if clinically indicated.⁵

Oral terbinafine is available on the PBS for dermatophyte infections **for patients 18 years of age or less**, where the patient has failed to respond to topical treatment **and** failed to respond to griseofulvin.¹² Dermatological review is warranted if the infection fails to respond to these initial treatments.

Document Review and Approval

Person Name / Committee	Position (if applicable)	Function (Owner Approve Review)
Dr Margaret Kay	General Practitioner	Document Owner
Dr Rebecca Farley and Dr Rachel Claydon	General Practitioners	Document Review
Refugee Primary Health Care Clinical Advisory Group QLD		Approval

References

- 1 Lamb SR, Rademaker M. (2001). "Tinea due to *Trichophyton violaceum* and *Trichophyton soudanense* in Hamilton, New Zealand." *Australas J Dermatol* 42(4): 260-263.
- 2 Ginter-Hanselmayer G, Weger W, Ilkit M, Smolle J. (2007). "Epidemiology of tinea capitis in Europe: current state and changing patterns." *Mycoses* 50 Suppl 2: 6-13.
- 3 El-Khalawany M, Shaaban D, Hassan H, Abdalsalam F, Eassa B, Abdel Kader A, Shaheen I. (2013). "A multicenter clinicomycological study evaluating the spectrum of adult tinea capitis in Egypt." *Acta Dermatovenerol Alp Pannonica Adriat* 22(4): 77-82.
- 4 Fulgence KK, Abibatou K, Vincent D, Henriette V, Etienne AK, Kiki-Barro PC, Yavo W, Kone M, Herve Menan EI. (2013). "Tinea capitis in schoolchildren in southern Ivory Coast." *Int J Dermatol* 52(4): 456-460.
- 5 Ely JW, Rosenfeld S, Seabury Stone M. (2014). "Diagnosis and management of tinea infections." *Am Fam Physician* 90(10): 702-710.
- 6 Pires CAA, Cruz NFSD, Lobato A M, Sousa POD, Carneiro FRO, Mendes AMD. (2014). Clinical, epidemiological, and therapeutic profile of dermatophytosis. *Anais brasileiros de dermatologia*, 89(2), 259-264.
- 7 Mutch RC, Cherian S, Nemba K, Geddes JS, Rutherford DM, Chaney GM, Burgner DP. (2012). "Tertiary paediatric refugee health clinic in Western Australia: analysis of the first 1026 children." *J Paediatr Child Health* 48(7): 582-587
- 8 Kieliger S, Glatz M, Cozzio A, Bosshard PP. (2014). "Tinea capitis and tinea faciei in the Zurich area - an 8-year survey of trends in the epidemiology and treatment patterns." *J Eur Acad Dermatol Venereol*.
- 9 Coulibaly O, Thera MA, Piarroux R, Doumbo OK, Ranque S. (2015). "High dermatophyte contamination levels in hairdressing salons of a West African suburban community." *Mycoses* 58(2): 65-68.
- 10 McPherson ME, Woodgyer AJ, Simpson K, Chong AH. (2008). "High prevalence of tinea capitis in newly arrived migrants at an English-language school, Melbourne, 2005." *Medical Journal of Australia* 189(1): 13-16.
- 11 Chaves NJ, Paxton G, Biggs BA, Thambiran A, Smith M, Williams J, Gardiner J, Davis JS; on behalf of the Australasian Society for Infectious Diseases and Refugee Health Network of Australia Guidelines writing group. "Recommendations for comprehensive post-arrival health assessment for people from refugee-like backgrounds." Available from: <https://www.asid.net.au/products/refugee-guidelines-2016>
- 12 Department of Health, 2021. *Pharmaceuticals Benefits Scheme (PBS)* Available from: <https://www.pbs.gov.au/medicine/item/2285G-2804N-4011D> [Accessed 2 Feb 2021]

This resource is endorsed by the Refugee Primary Health Care Clinical Advisory Group QLD auspiced through the Refugee Health Network Qld, Brisbane South PHN and Brisbane North PHN. The resource may not be modified without permission from the Refugee Primary Health Care Clinical Advisory Group QLD. The information is current at the time of printing and it is intended for use as a guide of a general nature only. The Refugee Health Network Qld, associated PHNs and the Refugee Primary Health Care Clinical Advisory Group QLD do not accept any responsibility or liability for any loss or damage as a result of any errors, inaccuracies, incompleteness and or discrepancies in the data, nor do the parties guarantee or make any representations as to the data. While the Australian Government helped fund this document, it has not reviewed the content and is not responsible for any injury, loss or damage however arising from the use of or reliance on the information provided herein. **Reviewed October 2021.**