



LIFE Worldwide: Leading International Fungal Education

February 2019

News roundup

Routine blood monitoring not necessary during terbinafine or griseofulvin therapy

Patients receiving antifungal therapy are often monitored for adverse reactions via blood tests (liver function tests and blood counts), but such testing adds to the costs of care and the burden on the patient. Over 10 years in the USA, [Dr Dieder Stolmeier](#) and colleagues studied laboratory data from 4985 patients (4309 received terbinafine, 739 received griseofulvin). Overall, abnormalities occurred in fewer than 0.23% of patients. Only one patient experienced temporary hepatotoxicity related to terbinafine (0.023%), which is consistent with the description of this side effect in the label as 'rare' (1 in 10000-1000, or 0.01-0.1%). They concluded that routine blood monitoring during terbinafine and griseofulvin therapy is not necessary, especially for short courses of therapy.

► Read more: [Stolmeier et al \(2018\) JAMA Dermatol. 154\(12\):1409-16](#)

7% of paediatric kidney transplant recipients develop disseminated histoplasmosis in Tennessee

Solid organ transplant recipients are at increased risk of [disseminated histoplasmosis](#), and paediatric cases are particularly challenging due to differences in immune function and antifungal pharmacokinetics (children may metabolise antifungals more rapidly than adults).

[Dr Kenice Ferguson-Paul](#) and colleagues in Memphis (TN, USA) recently published a series of 87 paediatric kidney transplant patients and 6 (6.9%) were diagnosed with disseminated histoplasmosis. Median time to infection was 14.8 months and cases generally progressed rapidly, although there were no fatalities. Clinicians in endemic regions should test patients presenting with unexplained fever, fatigue and respiratory symptoms, using the [histoplasmosis antigen assay](#) (urine, serum, BAL) and/or [direct microscopy](#) with GMS stain (BAL). For milder forms of the disease it may be possible to initiate therapy with itraconazole (less nephrotoxic than amphotericin B), although careful monitoring is required to balance azoles and immunosuppressive agents.

► Read more: [Ferguson-Paul et al \(2018\) Pediatr Transplant e13274](#)

► Try [Drug Interactions Pro](#), a free app for clinicians to check for interactions between antifungals and other drugs

Candida africana found to be the causative agent in 8% of Iranian rVVC cases

While not fatal, recurrent [vulvovaginal candidiasis](#) (rVVC, AKA thrush) causes significant distress and monetary costs to around 138 million women worldwide. It is most commonly caused by *Candida albicans* but may also be caused by a newly-recognised species, *Candida africana*. While many lab tests struggle to accurately distinguish these closely-related species, colonies grown on CHROMagar are different for *C. albicans* (light turquoise/green) and *C. africana* (deep turquoise/green), and PCR against the *HWP1* gene can also discriminate between them.

[Dr Behrouz Naeimi](#) and colleagues recently analysed 128 Iranian cases of rVVC, in order to discover the incidence of *C. africana*-caused cases, and to analyse strain homogeneity and prevalence of antifungal resistance. 10 isolates (7.8%) were shown to be *C. africana* by *HWP1* PCR. 100% sequence similarity was observed between Iranian *C. africana* strains, though variation was observed between isolates from different parts of the world. All were found to be susceptible to fluconazole, although resistance to other drugs (flucytosine, voriconazole, terbinafine) has been reported elsewhere.

► Read more: [Naeimi et al \(2018\) J Med Microbiol 67\(11\): 1601-1607](#)

Diagnostic tip: Imaging paracoccidioidomycosis

Diagnosis of paracoccidioidomycosis (PCM) requires identification of fungus in affected tissues, but imaging (especially CT) can provide additional information such as determining the extent of spread of infection, or assessment of response to treatment. [Dr Marcos Rosa Júnior](#) and colleagues at [HUCAM/UFES/EBSEH](#) (Brazil) surveyed the scientific literature and put together this comprehensive review

While the respiratory tract is often unaffected during acute infection (or may show the 'reverse halo sign'), the chronic phase often involves widespread nonspecific changes including nodules, opacities, consolidations and cavitation. Imaging (especially CT) is particularly useful for detecting whether the infection has spread to tissues outside the lungs, such as the lymphatic system, abdominal organs and GI tract, CNS or bones.

► Read the review: [Júnior et al \(2018\) Eur J Radiol 103:147-62](#)

Section in the spotlight: Otitis externa

The acute form of otitis externa affects around 1 in 250 people annually, and around 3-5% are affected by the chronic form. While the majority of cases are bacterial, around 10% are caused by fungi such as *Aspergillus*, *Candida* or *Scedosporium* (most commonly *Aspergillus niger*). Diagnosis is by culture and microscopy of debris collected from the ear canal. Infections are generally resolved using topical antifungals (econazole 1%; amphotericin B 3%; flucytosine 10%; clotrimazole 1%) for 1-3 weeks, although oral antifungals may occasionally be required if topical treatment fails, or when there is invasion.

► [Read more and watch a video of suction clearance](#)

Featured LIFE video

CPA surgery Dr Rajesh Shah

A lecture on the surgical management of chronic pulmonary aspergillosis by Dr Rajesh Shah. Covering radiological phenotypes, indications, surgical procedures, intra-/post-operative medications, outcomes and complications.

[Our YouTube channel](#) now has over 40 free video lectures, with accompanying slide sets, podcasts and suggested reading available to download from the LIFE website.

[Watch it](#)

Really important review

Molecular diagnostics in medical mycology

In this high-profile Nature Communications review, Brian Wickes and Nathan Wiederhold provide a detailed guide to the desirable characteristics for developing new molecular diagnostics using the latest technological platforms. They also summarise relevant parts of the FDA approval process for medical devices and review commercial tests that have already been approved.

[Read it](#)

New book

Westerdijk Laboratory Manual series No. 1: Fungal Biodiversity

A second version of this lab manual has been released by the group who run the annual mycology course in Utrecht (Netherlands). Covers techniques for isolation, cultivation (including >60 recipes for growth media), molecular and morphological study of filamentous fungi and yeasts. Includes up-to-date information about fungal life cycles (integrated sexual/asexual genera). Hardcover, full colour, 425 pages, 75 euros plus VAT.

[Order it](#)

Courses and conferences

- [NIAID Workshop: vaccine strategies for endemic fungal pathogens](#). 5-6 March. REGISTRATION DEADLINE FRI 22 FEB. Rockville MD, USA
- [14th Fungal Update](#). 15-16 March. London, UK.
- [Histoplasmosis in the Americas and the Caribbean](#), 2nd Meeting. 22-24 March. Manaus, Brazil
- [Fungal Pathogen Genomics](#) workshop. 7-12 May. Cambridge, UK
- China-Netherlands course in medical mycology. 18-26 May. Suzhou, China. Email: medicalmycology@163.com
- 2nd [Antifungal Drug Discovery symposium](#). 9-10 May. Duke University, Durham, USA
- [FEBS advanced lecture course on Human Fungal Pathogens](#). 18-24 May. La Colle sur Loup, France.
- [MOMY: current approaches to fungal pathogenesis](#). 17 Jul - 2 Aug. MBL, USA. REGISTRATION DEADLINE FRI 29 MARCH.



EARN CPD POINTS BY COMPLETING A FREE ONLINE FUNGAL MICROSCOPY COURSE

We are delighted to announce that the free fungal microscopy course at [Microfungi.net](#) is now accredited by the Royal College of Pathologists, allowing participants to gain CPD points for module 2 (18 points), module 3 (24 points) and module 4 (30 points). Organized in partnership between the Fungal Infection Trust and the University of Manchester, this is the only free online university-accredited course currently available.



LIFE Worldwide
Fungal Infection Trust
PO Box 482
Macclesfield
Cheshire, SK10 9AR
United Kingdom

Pass it on...

Do you know anyone who would like to read this newsletter? Help us spread the word about fungal infection education by forwarding this link: <https://www.ymlp.com/xgjqeqqegmgj> Or unsubscribe [here](#)

Let us know at info@life-worldwide.org about any courses, books or news items that you would like to see in future editions of this newsletter.

