International Journal of Infectious Diseases 80 (2019) 64–65

Contents lists available at ScienceDirect

International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid

Letter to the Editor

Letter to Habets JGV et al. on "A rare case of *Candida glabrata* spondylodiscitis: case report and literature review"

We write this reply to the letter by Habets JGV et al. published in the *International Journal of Infectious Diseases* (2018;72:19) (Habets et al., 2018). They referred to four cases of *Candida glabrata* infection that were not included in our review and suggested that *C. glabrata* spondylodiscitis or osteomyelitis should be reported under the common term 'spinal *C. glabrata* infection' considering that their incidence is low, radiological differentiation between these entities is difficult, and the treatment is similar. Lastly they underlined the importance of treating candidemia for a sufficient period of time to prevent recurrence at secondary locations, especially in patients with back pain.

Looking back at our work, we confirm that the cases reported by Bogaert et al. (1992) and Schiedo et al. (2017) were not included, while that reported by Dailey and Young (2011) was. An updated PubMed search revealed additional cases (Waldon and Chattopadhyay, 2018; Cone et al., 2004). Gustke and Wu (1981) was not included because we focused on infections of the spine. This brings the total number of reported cases to 20. The four additional cases are listed in Table 1.

Considering our case, magnetic resonance imaging (MRI) of the spine showed the involvement of both the disc and adjacent vertebral bodies. Spinal infections encompass infections of the disc, vertebrae, facets, and epidural spaces, considered as different manifestations of the same pathological process (Gouliouris et al., 2010). Thus we agree that reporting spondylodiscitis or vertebral osteomyelitis under the common term 'spinal infections' could help in the identification and analysis of the cases for research or study purposes.

The identification of candidemia is a prominent issue. Blood cultures have low sensitivity and in our case they were negative. This led to a delay in the administration of therapy. New methods combining MRI and molecular diagnostics appear to be accurate and rapid for the identification of candidemia (Clancy et al., 2018). We believe that early detection of candidemia through the use of these new tests could improve outcomes as a result of early initiation of targeted antifungal therapy.

The guidelines of the Infectious Diseases Society of America (IDSA) (Pappas et al., 2016) suggest a minimum of 2 weeks of antifungal therapy before this therapy is discontinued, provided that neutropenia and symptoms have resolved. A longer duration of therapy is warranted in patients with metastatic foci of infection. We believe that more studies on the appropriate duration of therapy for candidemia are needed, as this has not yet been assessed.

Table 1
Additional cases of *Candida glabrata* spondylodiscitis.

Author	Age (years) and sex	Risk factors	Localization	Diagnosis	Medical therapy	Surgery	Outcome
Bogaert et al. (1992)	72 M	Broad-spectrum antibiotics	L1–L2	Open biopsy	Fluconazole Amphotericin B	–	Died
Cone et al. (2004)	73 M	Candidemia Broad-spectrum antibiotics	L2–L3	Needle biopsy	Amphotericin B lipid complex	–	Cured
Schiedo et al. (2017)	61 M	*C. glabrata* infected fistula	L2–L4	Needle biopsy	Micafungin	–	Cured
Waldon and Chattopadhyay (2018)	81 M	Diabetes mellitus Chronic kidney disease	NA	Needle biopsy	Anidulafungin Fluconazole	–	Presumed cured

M, male; NA, not available.

https://doi.org/10.1016/j.ijid.2018.12.019

Ethical approval

No ethical approval was needed.

Funding source

No funding source was needed.

Conflict of interest

All authors deny any financial and personal relationships with other people or organizations that could inappropriately influence (bias) the work.

References

Bogaert J, Lateur L, Baert AL. Case report 762. Skelet Radiol 1992;21:550–4.
Clancy CJ, Pappas PG, Vazquez J, Judson MA, Kontoyiannis DP, Thompson 3rd GR, et al. Detecting infections rapidly and easily for candidemia trial, part 2 (DIRECT2): a prospective, multicenter study of the T2Candida Panel. Clin Infect Dis 2018;66(May (11)):1678–86, doi:http://dx.doi.org/10.1093/cid/cix1095.
Cone LA, Byrd RG, Potts BE, Wuesthoff M. Diagnosis and treatment of *Candida* vertebral osteomyelitis: clinical experience with a short course therapy of amphotericin B lipid complex. Surg Neurol 2004;62(3):234–7.
Dailey NJ, Young EJ. *Candida glabrata* spinal osteomyelitis. Am J Med Sci 2011;341:78–82.
Gouliouris Theodore, Aliyu Sani H, Brown Nicholas M. Spondylodiscitis: update on diagnosis and management. J Antimicrob Chemother 2010;65:iii11–24.
Gustke KA, Wu KK. Torulopsis glabrata osteomyelitis: report of a case. Clin Orthop Relat Res 1981;197–200.
Habets JGV, Teernstra OPM, van Hemert WLW, Linssen CK, Heijboer RJJ, Rijkers K. Letter to the editor on "A rare case of *Candida glabrata* spondylodiscitis: case report and literature review" by Gagliano et al. Int J Infect Dis 2018;72(July)19, doi:http://dx.doi.org/10.1016/j.ijid.2018.05.005 Epub 2018 May 14.
Pappas PG, Kauffman CA, Andes DR, Clancy CJ, Marr KA, Ostrosky-Zeichner L, et al. Clinical practice guidelines for the management of candidiasis: 106 update by the Infectious Diseases Society of America. Clin Infect Dis 2016;4:e1–50.
Schiedo RM, Lavelle W, Sun MH. Lumbar spinal *Candida glabrata* treated without surgical intervention: a case report. Cureus 2017;9:.
Waldon K, Chattopadhyay T. Lessons learned from a case of *Candida* discitis. Age Ageing 2018;47(January (1)):156.

M. Gagliano*
Division of Internal Medicine, Experimental and Clinical Medicine Department, AOU Careggi, Florence, Italy

L.R. Suardi
Division of Infectious Diseases, Experimental and Clinical Medicine Department, AOU Careggi, Florence, Italy

C. Marchiani
G. Bandini
N. Palagano
E. Cioni
A. Moggi Pignone
Division of Internal Medicine, Experimental and Clinical Medicine Department, AOU Careggi, Florence, Italy

* Corresponding author.
E-mail address: manfredi.gagliano@unfi.it (M. Gagliano).

Corresponding Editor: Eskild Petersen, Aarhus, Denmark

Received 3 December 2018