

# ***Histoplasma capsulatum* var *duboisii* infection:**

## **A Global Review, 1950–2021**

**Bassey E. Ekeng<sup>1,2,3\*</sup>, Adeyinka A. Davies<sup>1,4</sup>, Bright K. Ocansey<sup>5</sup>, Neil R. H. Stone<sup>6</sup> and Rita O. Oladele<sup>1,7</sup>**

Correspondence: basseyewaekeng@gmail.com; +23408037361816

1. Loulergue P, Bastides F, Baudouin V, Chandenier J, Mariani-Kurdjian P, Dupont B, et al. Literature Review and Case Histories of *Histoplasma capsulatum* var. *duboisii* Infections in HIV-infected Patients. *Emerg. Infect. Dis.* 2007; 13: 1647.
2. Khathali LC, Nhlonzi GB, Mwazha A. *Histoplasma capsulatum* var. *duboisii*: A KwaZulu-Natal, South Africa public sector perspective. *J. Cutan. Pathol.* 2021; 49: 139–146.
3. Amona, FM, Denning DW, Moukassa D, Develoux M, Hennequin C. Histoplasmosis in the Republic of Congo dominated by African histoplasmosis, *Histoplasma capsulatum* var. *duboisii*. *PLoS Negl. Trop. Dis.* 2021;15, e0009318.
4. Darré T, Saka B, Mouhari-Touré A, Dorkenoo AM, Amégbor K, Pitche VP, Napo-Koura G. Histoplasmosis by *Histoplasma capsulatum* var. *duboisii* Observed at the Laboratory of Pathological Anatomy of Lomé in Togo. *J. Pathog.* 2017; 2017, 2323412.
5. Valero C, Gago S, Monteiro MC., Alastruey-Izquierdo A, Buitrago MJ. African histoplasmosis: New clinical and microbiological insights. *Med. Mycol.* 2018; 56: 51–9.
6. Zida A, Niamba P, Barro-Traoré F, Korsaga-Somé N, Tapsoba P, Briegel J, Guiguemdé RT. Disseminated histoplasmosis caused by *Histoplasma capsulatum* var. *duboisii* in a non-HIV patient in Burkina Faso: Case report. *J Mycol Med.* 2015;25(2):159-62.
7. Minta DK, Dembélé M, Lorre G, Diallo DA, Traoré HA, Chabasse D. Histoplasmose africaine à *Histoplasma capsulatum* var. *duboisii*. A propos d'un cas au Mali [African histoplasmosis (*Histoplasma capsulatum* var. *duboisii*): a case report from Mali]. *Sante.* 2005;15(3):195-9.
8. Ndiaye D, Diallo M, Sene PD, Ndiaye M, Ndir O. Histoplasmose disséminée à *Histoplasma capsulatum* var. *duboisii* au Sénégal. À propos d'un cas chez un patient VIH positif [Disseminated histoplasmosis due to *Histoplasma capsulatum* var. *duboisii* in Senegal. A case in HIV-infected patient]. *J Mycol Med.* 2011;21(1):60-4.
9. Vanbreuseghem R. L'histoplasmose Africaine ou histoplasmose causée par *Histoplasma duboisii* Vanbreuseghem 1952 [African histoplasmosis or histoplasmosis caused by *Histoplasma duboisii* Vanbreuseghem 1952]. *Bull Acad R Med Belg.* 1964; 4:543-85.
10. Bayo S, Duflo B. Quatre nouveaux cas d'histoplasmose africaine à *Histoplasma duboisii* observés au Mali [4 new cases of African *Histoplasma duboisii* histoplasmosis observed in Mali]. *Dakar Med.* 1979;24(3):293-8. French.
11. Hiltenbrand C, Antoine HM, Laurens A, Juillet Y, Du Bourguet F, Carlet J. Pathologie d'importation: histoplasmose africaine à *H. duboisii* [Imported pathology: African histoplasmosis due to *Histoplasma duboisii*]. *Ann Med Interne (Paris).* 1972;123(6):573-8
12. Gentilini M, Desportes M, Danis M, Volkova V, Félix H. Histoplasmose pulmonaire Africaine à *Histoplasma duboisii* [African pulmonary histoplasmosis due to *Histoplasma duboisii*]. *Ann Med Interne (Paris).* 1977;128(5):451-5.
13. Valmary J, Bauduceau B, Lartisien D, Flechaire A, Debord T, Daly JP, Laverdant C. Histoplasmose disséminée à *Histoplasma duboisii* chez une Ivoirienne [Disseminated *Histoplasma duboisii* histoplasmosis in a female inhabitant of the Ivory Coast]. *Med Trop (Mars).* 1984;44(4):369-73.
14. Resseler JJ, Farrior HL, Vanbreuseghem R. [2 new Congolese cases of histoplasmosis due to *Histoplasma duboisii* Vanbreuseghem 1952]. *Ann Soc Belg Med Trop (1920).* 1962; 42:801-14.

15. Derrien JP, Vedy J, Monnier A. Histoplasmose pulmonaire africaine à *Histoplasma duboisii*. Premier cas tchadien [African pulmonary histoplasmosis caused by *Histoplasma duboisii* (1st case in Chad)]. Bull Soc Med Afr Noire Lang Fr. 1978;23(3):210-3. French. PMID: 719827.
16. Van Laethem R, Thys A, Vanbreuseghem R. [Third Congolese case of histoplasmosis due to *Histoplasma duboisii* Vanbreuseghem 1952]. Ann Soc Belg Med Trop (1920). 1959; 39:319-29.
17. Sanguino JC, Rodrigues B, Baptista A, Quina M. Focal lesion of African histoplasmosis presenting as a malignant gastric ulcer. Hepatogastroenterology. 1996 May-Jun;43(9):771-5. PMID: 8799429.
18. Pichard E, Duflo B, Sangare S, Naco A, Diallo AN. L'histoplasmose africaine au Mali [African histoplasmosis in Mali]. Ann Med Interne (Paris). 1987;138(4):278-81.
19. André C, Badoual J, Kalifa G, Dubousset J. Histoplasmose africaine. Une observation [African histoplasmosis. A case]. Arch Fr Pediatr. 1984 Jun-Jul;41(6):429-31. French. PMID: 6487046.
20. Imperato PJ, Bridge MF. *Histoplasma duboisii* in the Republic of Mali. Trop Geogr Med. 1971;23(1):79-83..
21. Geffray L, Veyssier P, Cevallos R, et al. Histoplasmose africaine: aspects cliniques et thérapeutiques: relations avec le SIDA: à propos de 4 observations, dont une chez un coinfecté VIH1-HTLV1. Ann Med Interne (Paris) 1994; 145(6): 424-8
22. Moraes M, Lima F, Nizapinheiro M, et al. Combined medical and surgical therapy of disseminated African histoplasmosis with a successful outcome: two case reports. Mediterranean Journal of Infectious and Parasitic Diseases 1997; XII (3): 115-18.
23. Giacomini T, Bourdon P, Malbec D, Choudat L, Dupont B. Histoplasmose surrénalienne due à *Histoplasma capsulatum* var *duboisii*. J Mycol Med 1993; 3: 172-4.
24. Vieira R, Botelho M, Lima C. Intra-abdominal abscess: A clinical manifestation of African Histoplasmosis. J Mycol Med 2009; 19: 134-7
25. Bashiri SA, Shahmirzadi MRR, Abro AH. A case of disseminated histoplasmosis which was misdiagnosed as squamous cell carcinoma of skin and pulmonary tuberculosis;case report, Rashid hospital,2013. In: Gulf Congress of Clinical Microbiology & Infectious Disease. Dubai, United Arab Emirates; 2016. p. PP05
26. Mackowiak PA, Hasse B, Kronenberg A. African Immigrant with Weight Loss and Disseminated Skin Lesions, Clinical Infectious Diseases. 2003; 37(5):726-27
27. Asamoa EA, Ayanlere AO, Olaitan AA, Adekeye EO. Paediatric tumours of the jaws in northern Nigeria. J Cranio-Maxillofacial Surg [Internet]. 1990,18(3),130-5.
28. Jacyk WK, Lawande RV, Tulpule SS. Deep mycoses in West Africa: a report of 13 cases and review of the Nigerian literature. J Natl Med Assoc. 198,73(3),251-6.
29. KA Adeniji AA. Peripheral lymphadenopathy in Nigeria. Afr J Med Med Sci. 2000;29:233-7.
30. Oguachuba HN, Gugnani HC. African histoplasmosis manifesting as a cutaneous tumour treated with econazole. J Trop Med Hyg [Internet]. 1982
31. Iseh, K. Histoplasmosis of paranasal sinuses and orbit: A case report Sahel Med J. 2003,6(3),87-90
32. S Olatoke, P Olaitan, K Ojemakinde, O Olakulehin, S Fadiora. Histoplasmosis Of The Skull Bone In An HIV Positive patient. Intern. J. Surg. 2003, 8,1.
33. Seleye-Fubara D, Etebu E, Bob-Yellowe E. Granulomatous osteomyelitis: A review of 13 cases in Port Harcourt, Nigeria. Sahel Med J 2011,14(1),11-15
34. Onuigbo WI, Gugnani HC. Deep mycoses prevalent in the Igbos of Nigeria. Int J Dermatol. 1976,15(6),432-7.
35. Ajayi, B. G. K., Osuntokun, B., Olurin, O., Kale, O. O., and Junaid, T. A. Orbital histoplasmosis due to *Histoplasma capsulatum* var. *duboisii*: successful treatment with septrin. *J. Trop. Med. Hyg.*, 89, 179–187, 1986.
36. Clark BM, Greenwood BM. Pulmonary lesions in African histoplasmosis. J Trop Med Hyg. 1968;71(1),4–10.
37. Adekunle OO, Sudhakaran P, Timeyin ED. African histoplasmosis of the jejunum. Report of a case. J Trop Med Hyg. 1978, 81(5),88-90.
38. Williams AO, Lawson EA, Lucas AO. African histoplasmosis due to *Histoplasma duboisii*. Arch Pathol. 1971,92(5),306-18.
39. Marjolet M, Vermeil C. Histoplasmosis duboisii. Notes and comments on two African cases observed in Nantes. Mykosen 1984; 27:547–51.

40. Murphy RA, Gounder L, Manzini TC, Ramdial PK, Castilla C, Moosa MY. Challenges in the management of disseminated progressive histoplasmosis in human immunodeficiency virus-infected patients in resource-limited settings. *Open Forum Infect Dis.* 2015; 2(1): ofv025
41. Khalil M, Iwatt AR, Gugnani HC. African histoplasmosis masquerading as carcinoma of the colon. *Dis Colon Rectum [Internet].* 1989; 32(6),518–520.
42. Khalil M, Ekanem IO, Gugnani HC, Attah EB. Some deep mycoses diagnosed by histopathology in South Eastern Nigeria. *Rev Iberoam Micol.* 1999;16(4),221-4. 4
43. Katchy AU. Eyesan SU. Awotunde TO. Adesina SA. Ayandele BO. Sabageh D. *Histoplasma duboisii* of the femoral bone. *J. Res. Med. Sci.* 2019; 24:19.
44. Adekeye EO. Edwards MB. Williams HK. Mandibular African histoplasmosis: Imitation of neoplasia or giant-cell granuloma? *Oral Surg. Oral Med. Oral Pathol.* 1988 Jan;65(1):81-4.
45. Akinosi JO. African histoplasmosis presenting as a dental problem. *Br. J. Oral Surg.* 1970; 8:58–63.
46. Olurin O. Orbital rhabdomyosarcoma in pregnancy. *Cancer* 1969; 24: 1013–6.
47. Bansal RK. Suseelan AV. Gugnani HC. Orbital cyst due to *Histoplasma duboisii*. *Br. J. Ophthalmol.* 1977; 61: 70–1.
48. Daramola JO, Ajagbe HA. Abioye AA, Ogunba EO. Maxillary African histoplasmosis mimicking malignant jaw tumour. *Br. J. Oral Surg.* 1979; 16: 241–7.
49. Akpuaka FC. Gugnani HC, Iregbulam LM. African histoplasmosis: Report of two patients treated with amphotericin B and ketoconazole. *Mycoses* 1998; 41: 363–4.
50. Onwuasoigwe O. Gugnani HC. African histoplasmosis: Osteomyelitis of the radius. *Mycoses.* 1998; 41:105–7.
51. Onwuasoigwe O. Fluconazole in the therapy of multiple osteomyelitis in African histoplasmosis. *Int. Orthop.* 1999; 23: 82–4.
52. Khalil MA. Hassan AW. Gugnani HC. African histoplasmosis: Report of four cases from north-eastern Nigeria. *Mycoses* 1998; 41: 293–5.
53. Mace MC. Oral African histoplasmosis resembling Burkitt's lymphoma. *Oral Surg.* 1978; 46: 407–12.
54. Shoroye A, Oyedele GA. African histoplasmosis presenting as a facial tumour in a child. *Ann. Trop. Paediatr.* 1982; 2: 147–9.
55. Akinyoola AL, Onayemi O, Famurewa OC. African histoplasmosis-masquerading as a malignant bone tumour. *Trop. Doct.* 2006; 36: 250–1.
56. Ige AO, Nwosu SO, Odesanmi WO. African histoplasmosis (Duboisii) of the skull with neurological complication--a case report and review of literature. *Afr. J. Med. Med. Sci.* 1992; 21:19–21.
57. Olasoji HO, Pindiga UH, Adeosun OO. African oral histoplasmosis mimicking lip carcinoma: Case report. *East Afr. Med. J.* 1999; 76: 475–6.
58. Egere JU, Gugnani HC, Okoro AN, Suseelan AV. African histoplasmosis in Eastern Nigeria: Report of two culturally proven cases treated with septrin and amphotericin B. *J. Trop. Med. Hyg.* 1978; 81: 225–9.
59. Ajabor LN, Lucas AO, Lawson EA, Seriki O. African histoplasmosis complicating pregnancy. *Trans. R. Soc. Trop. Med. Hyg.* 1971; 65: 650–60.
60. Lucas AO. Cutaneous manifestations of African Histoplasmosis. *Br. J. Dermatol.* 1970; 82: 435–47.
61. Mabey DCW, Hay RJ. Further studies on the treatment of African histoplasmosis with ketoconazole. *Trans. R. Soc. Trop. Med. Hyg.* 1989; 83:560–2.
62. Thompson EM. Ellert J, Peters LL, Ajdukiewicz A, Mabey, D. *Histoplasma duboisii* infection of bone. *Br. J. Radiol.* 1981;54: 518–21.
63. Gonçalves D, Ferraz C, Vaz L. Posaconazole as rescue therapy in African histoplasmosis. *Braz. J. Infect. Dis* 2013; 17: 102–5.
64. Cipriano A, Neves-Maia J, Lopes V, Fleming CE, Ferreira MA, Bathay J. African histoplasmosis in a Guinea Bissau patient with HIV-2: Case report and review. *J. Mycol. Med.* 2019; 30: 100904.
65. Konan L, Drogba L, Brahima D, Mesfin FB. A Case of *Histoplasma duboisii* Brain Abscess and Review of the Literature. *Cureus* 2020; 12, e6984.
66. Bankolé Sanni R, Denoulet C, Coulibaly B, Nandiolo R, Kassi E, Honde M, Mobiot MLA propos d'un cas ivoirien d'histoplasmosse osseuse et cutanée à *Histoplasma capsulatum* var. *duboisii* [Apropos of 1 Ivoirian case of osseus and cutaneous histoplasmosis by *Histoplasma capsulatum* var. *duboisii*]. *Bull. Soc. Pathol. Exot.* 1998; 91:151–3.
67. Ahogo KC, Sangaré A, Gbery IP, Ecra E, Kaloga M, Kassi K et al. Histoplasmosse due à *Histoplasma capsulatum* var. *duboisii* à localisation cutanée chez un enfant immunocomp tent. A propos d'un cas à

- Abidjan, Côte d'Ivoire [Cutaneous histoplasmosis due to *Histoplasma capsulatum* variety *duboisii* in an immune competent child. About one case in Abidjan, Côte d'Ivoire]. *Bull. Soc. Pathol. Exot.* 2009; 102: 47–9.
68. Arlet JB, Furco-Mazzantini A, Huerre M, Neuville S, Molina JM. African histoplasmosis infection with peritoneal involvement. *Eur. J. Clin. Microbiol. Infect. Dis.* 2004; 23:342–4.
69. Minta DK, Sylla M, Traoré AM, Soukho-Kaya A, Coulibaly I., Diallo K et al. Première observation malienne d'histoplasmose africaine disséminée à prédominance osseuse chez un enfant VIH négatif. Revue de la littérature [Malian first observation of disseminated African histoplasmosis with predominant bone localizations in an HIV-negative child in Bamako (Mali). Review of the literature]. *J. Mycol. Med.* 2014; 24:152–7.
70. N'dri OD, Varlet G, Kakou M, Zunon-Kipre Y, Broalet E, Ba Zeze V. Spondylodiscite à histoplasma *duboisii*. A propos de deux observations et revue de la littérature. A propos de deux observations et revue de la littérature [Spondylodiscitis due to *Histoplasma duboisii*. Report of two cases and review of the literature]. *Neurochirurgie* 2001; 47:431–4.
71. Darré T, Kpatcha M, Djiba T, Sewa E, Dorkenoo AM, Kouyaté M et al. African histoplasmosis of the penis. *Oxf. Med. Case Rep.* 2020; 25, omaa043.
72. Diadie S, Diatta B, Ndiaye M, Gaye M, Sow D, Ndiaye MT et al. Histoplasmose multifocale à *Histoplasma capsulatum* var. *duboisii* chez un Sénégalais de 22ans sans immunodépression prouvée [Multifocal histoplasmosis due to *Histoplasma capsulatum* var. *duboisii* in a 22-year-old Senegalese patient without proven immunodepression]. *J. Mycol. Med.* 2016; 26: 265–70.
73. Barro F, Sanwidi M, Dao F, Korsaga N, Niamba P, Traoré A et al. Histoplasmose africaine disséminée chez un enfant immunocompétent au Burkina Faso: Un cas [Disseminated African Histoplasmosis in an immunocompetent child in Burkina Faso: One case]. *Our Dermatol. Online* 2013, 4, 361–368.
74. Delclaux C, Schutz R, Calzolari M, Balloul E, Zango B. Histoplasmose généralisée à *Histoplasma duboisii* avec atteinte médiastino-pulmonaire. Guérison après 15 mois de traitement par kéroconazole [Generalized histoplasmosis due to *Histoplasma duboisii* with mediastino-pulmonary infection. Cure after 15 months of treatment with ketoconazole]. *Rev. Mal. Respir.* 1992; 9: 559–60.
75. Ouédraogo NA, Kouassi AA, Ouédraogo MS, Somda KS, Tapsoba GP, Ouangre A et al. Peritoneal and pericardial involvement of multifocal African histoplasmosis in severe malnutrition. *Our Dermatol. Online* 2021; 12: 16–20.
76. Martin A, Kweku AJJ, Afua O, Koranteng TE, Kwasi AE. African histoplasmosis—An underdiagnosed tropical disease in Ghana. *World J. Adv. Res. Rev.* 2020; 7: 178–82.
77. Arendt V, Coremans-Pelseneer J, Gottlob R, Bril T, Bujan-Boza W, Fondu P. African histoplasmosis in a Belgian AIDS patient. *Mycoses* 1991, 34, 59–61.
78. Carme B, Ngapiro AI, Ngolet A, Ibara JR, Ebikili B. Disseminated African histoplasmosis in a Congolese patient with AIDS. *J. Med. Vet. Mycol.* 1992; 30: 245–8.
79. Tsiodras S, Drogari-Apiranthitou M, Pilichos K, Leventakos K, Kelesidis T, Buitrago MJ et al. An unusual cutaneous tumour: African histoplasmosis following mud baths: Case report and review. *Am. J. Trop. Med. Hyg.* 2012; 86: 261–3.
80. Pakasa N, Biber A, Nsiangana S, Imposo D, Sumaili E, Muhindo H et al. African Histoplasmosis in HIV-Negative Patients, Kimpese, Democratic Republic of the Congo. *Emerg. Infect. Dis.* 2018; 24: 2068.
81. Garcia-Guiñon A, Torres-Rodríguez JM, Ndiodongarte DT, Cortadellas F, Labrin L. Disseminated histoplasmosis by *Histoplasma capsulatum* var. *duboisii* in a paediatric patient from the Chad Republic, Africa. *Eur. J. Clin. Microbiol. Infect. Dis.* 2009; 28: 697–9.
82. N'Golet A, N'Gouoni BG, Moukassa D, Nkoua-Mbon JB. Maxillary African histoplasmosis: Unusual diagnostic problems of an unusual presentation. *Pathol. Res. Pract.* 2005; 200: 841–4.
83. Therby A, Polozzanu O, Khau D, Monnier S, Greder BA, Eloy O. Aspergillus galactomannan assay for the management of histoplasmosis due to *Histoplasma capsulatum* var. *duboisii* in HIV-infected patients: Education from a clinical case. *J. Mycol. Med.* 2014; 24: 66–70.
84. Ngatse-Oko A, Péko JF, Ntsiba H, Ngolet A, Kokolo J, Ondzoto M et al. Fracture pathologique révélant une histoplasmose osseuse. A propos d'une observation chez une patiente de 60 ans [Pathological fracture revealing an osseous histoplasmosis. A case report on a 60-year patient]. *Bull. Soc. Pathol. Exot.* 2006; 99: 227–9.
85. Chandenier J, Goma D, Moyen G, Samba-Lefèvre MC, Nzinguula S, Obengui Mbitsi, A et al. African histoplasmosis due to *Histoplasma capsulatum* var. *duboisii*: Relationship with AIDS in recent Congolese cases. *Sante* 1995; 5: 227–34.

86. Mabiala Babela JM, Mandavo CM, Evrard RN, Ibara BO, Lamah L. African Histoplasmosis. A report of three pediatric cases. *J Mycol. Med.* 2017; 27: 133–8.
87. Boukassa L, Ngackosso OB, Bambino SBK, Mbaki HBE, Monianga SN, Biatsi KM et al. Cranial and Spinal Locations of *Histoplasma capsulatum* var. *duboisii* in Brazzaville, Congo. *Iran J. Neurosurg.* 2019; 5: 63–9.
88. Simon F, Chouc PY, Hervé V, Branquet D, Jeandel P. Localisations ostéo-articulaires de l'histoplasmose africaine (*Histoplasma duboisii*). A propos d'un cas et revue de la littérature [Bone and joint sites of African histoplasmosis (*Histoplasma duboisii*)]. Apropos of a case and review of the literature]. *Rev. Rhum.* 1994; 61: 829–38.
89. Gumbol T, Just-Nibbling G, Robertson V, Latif AS, Borok, MZ, Hohle R. Clinicopathological features of cutaneous histoplasmosis in human immunodeficiency virus-infected patients in Zimbabwe. *Trans. R. Soc. Trop. Med. Hyg.* 2001; 95: 635–6.
90. Musoke F. Spinal African histoplasmosis simulating tuberculous spondylitis. *Afr. Health Sci.* 2001; 1: 28–9.
91. Lanceley JL, Lunn HF, Wilson AM. Histoplasmosis in an African child. *J. Pediatr.* 1961; 59: 756–64.
92. Rakotoarivelo R, Razafimahefa S, Andrianiaina H, Randria MJD. Une histoplasmose africaine chez un patient malgache immunocompétent. *Bull. Soc. Pathol. Exot.* 2010; 103: 19–21.
93. Guma SA, Ahmed MA, Hassan MEA, El Hassan AM. A case of African histoplasmosis from Sudan. *Trans. R. Soc. Trop. Med. Hyg.* 1988; 82: 503–5.
94. Cardoso L, Silva C, Marques N, VerÃ-ssimo C. Tonsillar ulceration as manifestation of disseminated African histoplasmosis in an immunocompetent Portuguese host. *Med. Mycol. Case Rep.* 2017;17: 14–6.
95. Velho GC, Cabral JM, Massa A. African histoplasmosis: Therapeutic efficacy of itraconazole. *J. Eur. Acad. Dermatol. Venereol.* 1998;10: 77–80.
96. Vanbreuseghem R. *Histoplasma Duboisii* and African Histoplasmosis. *Mycologia* 1963; 45: 803–16.
97. Richaud C, Chandresris M, Lanternier F, Benzaquen-Forner H, Garcia-Hermoso D, Picard C et al. Imported African Histoplasmosis in an Immunocompetent Patient 40 Years after Staying in a Disease-Endemic Area. *Am. J. Trop. Med. Hyg.* 2014; 91:1011–4.
98. Rivron RP, Evans EGV. Enlarged cervical lymph node due to African histoplasmosis. *J. Laryngol. Otol.* J.1988; 102: 945–6.
99. Duncan JT. Tropical African histoplasmosis. *Trans. R. Soc. Trop. Med. Hyg.* 1958; 52(5): 468–74.
- 100.Paccoud O, Nervo M, Alanio A, Garcia-Hermoso D, Bougnoux ME, Mate J et al. Cerebral histoplasmosis caused by *Histoplasma capsulatum* var. *duboisii* in a patient with no known immunodeficiency. *J. Travel Med.* 2021; 6; 28(1):taaa167.
- 101.Régnier-Rosencher E, Dupont B, Jacobelli S, Paugam A, Carlotti A, Boitier F et al. Late occurrence of *Histoplasma duboisii* cutaneous and pulmonary infection 18 years after exposure. *J. Mycol. Méd.* 2014; 24: 229–33.
- 102.Pellaton C, Cavassini M, Jaton-Ogay K, Carron P, Christen-Zaech S, Calandra T et al. *Histoplasma capsulatum* var. *duboisii* infection in a patient with AIDS: Rapid diagnosis using polymerase chain reaction-sequencing. *Diagn. Microbiol. Infect. Dis.* 2009; 64: 85–9.
- 103.Eichmann A, Schär G. Afrikanische Histoplasmosen bei Patient mit HIV-2-Infektion [African histoplasmosis in a patient with HIV-2 infection]. *Schweiz Med. Wochenschr.* 1996; 126: 765–9.
- 104.Hasse B, Kronenberg A. African immigrant with weight loss and disseminated skin lesions. *Clin. Infect. Dis.* 2003; 37: 692–3.
- 105.Breton G, Adle-biassette H, Audrey T, Ramanoelina J, Choudat L, Bissuel F et al. Immune reconstitution inflammatory syndrome in HIV-infected patients with disseminated histoplasmosis. *Aids* 2006; 20: 119–32.
- 106.Fritzsche C, Loebermann M, Aepinus C, Bolz M, Barten M, Reisinger EC. Vaginal ulceration and local lymphadenopathy in an African immigrant. *Clin. Infect. Dis.* 2009; 48:441–2.
- 107.Oddo D, Etchart M. Histoplasmosis *duboisii* (African Histoplasmosis) An African Case Reported from Chile with Ultrastructural Study. *Path. Res. Pract.* 1991; 186: 514–7.
- 108.Abrucioneto L, Takahashi MDF, Salebian A, Cuce LC. African histoplasmosis. Report of the first case in Brazil and treatment with Itraconazole. *Rev. Inst. Med. Trop. Sao Paulo* 1993; 35: 295–9.
- 109.Shore RN, Waltersdorff RL, Edelstein MV, Teske JH. African histoplasmosis in the United States. *JAMA* 1981; 245: 734.
- 110.Nethercott JR, Schachter RK, Givan KF, Ryder DE. Histoplasmosis Due to *Histoplasma capsulatum* var *duboisii* in a Canadian Immigrant. *Arch. Dermatol.* 1978; 114: 595–8.
- 111.Ravindran S, Sobhanakumari K, Celine M, Palakkal S. African histoplasmosis: The first report of an indigenous case in India. *Int. J. Dermatol.* 2015; 54: 451–5.

112. Murata M, Furusyo N, Otaguro S, Nabeshima S, Ariyama I., Hayashi J. HIV infection with concomitant cerebral toxoplasmosis and disseminated histoplasmosis in a 45-year-old man. *J. Infect. Chemother.* 2007; 13: 51–5.
113. Karaev ZO, Bykov VL, Kornishevva VG, Gorshkova GI, Afrikanskii gistoplazmooz [African histoplasmosis]. Sov Med. 1989; 2: 105-8
114. Coulanges P. L'histoplasmosse à grandes formes (H. duboisii) à Madagascar (à propos de 3 cas) [Large-form histoplasmosis (H. duboisii) in Madagascar (apropos of 3 cases)]. Arch Inst Pasteur Madagascar. 1989;56(1):169-74.
115. Coulanges P, Raveloarison G, Ravisse P. Existence de l'histoplasmosse à *Histoplasma duboisii*, en dehors de l'afrigue continentale (à propos du premier cas malgache) [Existence of *Histoplasma duboisii* histoplasmosis outside continental Africa (apropos of the first Madagascar case)]. Bull Soc Pathol Exot Filiales. 1982;75(4):400-3.
116. Mounguengui D, Ondounda M, Mandji Lawson JM, Coniquet S, Moussouna M, Magne C, Nzenze JR. Histoplasmosse : première observation au Gabon [Histoplasmosis: case report from Gabon]. Med Sante Trop. 2012;22(1):82-3.
117. Kotloff KL, Vial PA, Young JW, Smith AG. *Histoplasma duboisii* infection in a Liberian girl. *Pediatr Infect Dis J.* 1987;6(2):202-5.
118. Schmidt DB, Wegmann W, Ochsner P, Gyr K. *Histoplasma-duboisii-Osteitis* als Importkrankheit [Histoplasma duboisii osteitis as an imported disease]. Schweiz Med Wochenschr. 1987 Dec 12;117(50):2016-20.
119. Mudawi HM, Elamin EM, Baraka OZ, El-Hassan AM. Addison's disease due to *Histoplasma duboisii* infection of the adrenal glands. *Saudi Med J.* 2008 Jun;29(6):904-6.
120. Péquignot H, Abelanet R, Christoforov B, Drouhet E, Duflo B, Gorin JP, Lapierre J, de Saint-Maur P, Tran-Vinh-Hien. Péritonite par perforation d'une histoplasmosse intestinale à *Histoplasma duboisii* [Peritonitis due to perforation of intestinal histoplasmosis due to *Histoplasma duboisii*]. Ann Med Interne (Paris). 1972;123(11):981-6.
121. Sharmin S, Ohori A, Sano A, Kamei K, Yamaguchi M, Takeo K, Uno J, Nishimura K, Miyaji M. *Histoplasma capsulatum* variety *duboisii* isolated in Japan from an HIV-infected Ugandan patient. Nihon Ishinkin Gakkai Zasshi. 2003;44(4):299-306.
122. Gentilini M, Brucker G, Danis M, Lebas J, Mogahed A, Felix H. Dix cas d'histoplasmosse: aspects cliniques, biologiques et thérapeutiques [Histoplasmosis: clinical, biological, and therapeutic aspects in ten cases (author's transl)]. Ann Med Interne (Paris). 1980;131(4):209-12.

**[Two case series (Ekeng BE et al 2021 and Develoux M et al 2021) were excluded as similar cases from the mentioned series were also found when searching data bases. Also, the 237 cases of Hcd infection mentioned by Carme et al 1993 were excluded as their locations were not well described].**