

## Dermoscopic features of Monkeypox virus skin infection

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In 2003 Sejvar *et al.* reported the first outbreak of monkeypox in the Midwestern United States, the first documented human infection in the Western Hemisphere. Since then, only few cases were yearly subsequently observed until the outbreak in 2022. On July 23, 2022 the WHO declared the rapidly spreading monkeypox outbreak a global health emergency.<sup>1,2</sup>

We report a paradigmatic case with typical clinical and dermoscopic features that we recently observed at our institution.

A 24-year-old Italian man with known history of vitiligo complained fever and headache for one week. Two days later inguinal lymph nodes enlarged and simultaneously few erythematous macules appeared on the trunk, extremities, genital and perianal area. Few hours later pustules developed on the macules. At physical examination the patient had fever (38°) and about 2cm large inguinal lymph nodes were palpable. Isolated umbilicate pustules with peripheral erythema were observed on the trunk, extremities and genital area (Figure 1A,C,E). Dermoscopy highlighted the yellow pustule with central umbilication and yellow crust, surrounded by a structureless erythematous area with nonspecific vessels

and without scaling (Figure 1B). Several perianal cropped pustules and painful erosions with edema and severe burning were present (Figure 1D) while face, oral mucosa, palms and soles were not involved. HIV, herpes simplex and lue serology were negative but polymerase chain reaction (PCR) resulted positive for monkeypox. The patient had never travelled to Africa, but he had unprotected sex with men in the last month. He was managed as outpatient with antipyretics without complications.

Monkeypox is a self-limited viral zoonotic disease with person-to-person transmission through direct contact or fomites. Incubation time lasts usually from 1 to 3 weeks. Monkeypox occurs mainly in central and west Africa. Since May 2022, an outbreak of monkeypox has been ongoing in non-endemic countries. Patients complain fever, swollen lymph nodes and a skin rash (first macules, then umbilicated pustules) involving particularly the genital and perianal area. Main differential diagnoses, as in our case, are herpes infection, varicella-zoster and syphilis. PCR of material collected with swabs by pustular lesions or nasopharyngeal swabs or serum are diagnostic. Only few patients (3-6%) have severe disease.<sup>2,3</sup>

Dermoscopy has become widely used in general dermatology as an integrative part of clinical dermatologic examination for pigmented and non-pigmented skin lesions as well as inflammatory and infectious skin diseases (so called “inflammoscopy”).<sup>4</sup> Therefore a standard approach also for inflammoscopy with a “two-step” dermoscopic procedure has been proposed.<sup>4</sup> Recently, Maatouk *et al* also reviewed the existing data concerning the use of

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dermoscopy in evaluating genital skin disorders.<sup>5</sup> Durdu *et al.* assessed the diagnostic accuracy of dermoscopy for folliculitis and found a good diagnostic accuracy for Demodex, scabietic, and dermatophytic folliculitis, as well as for pseudofolliculitis.<sup>6</sup> To our knowledge, dermoscopic features of viral skin infections like herpes infection, varicella-zoster and monkeypox infection has not been described in details yet in the English literature.

Physicians should be aware that patients presenting with fever and pustular rash particularly involving the genital area might be affected by monkeypox. Dermoscopy may be helpful in patient's evaluation.

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**Figure 1.** Isolated umbilicate pustules with peripheral erythema on the trunk, extremities and genital area (A, C, E); yellow pustule with central umbilication and yellow crust (B); perianal cropped pustules and painful erosions with edema and severe burning (D).

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