Journal of Pakistan Association of Dermatologists. 2022;**32(4)**:662-664.

Editorial

The importance of dermatological lesions in the agile diagnosis of Monkeypox

Angie Marcela Arboleda Roca[1], Aymer Daniel Bolívar Cabrera[2], Gabrielle Yolmari Curicó Martínez[3], Laura Camila Millán Guerrero[4], Gonzalo Andrés Domínguez-Alvarado[5]

[1] Médica General, Universidad Metropolitana de Barranquilla, Barranquilla, Colombia.
[2] Médico General, Universidad Metropolitana de Barranquilla, Barranquilla, Colombia.
[3] Medica General, Fundación Universitaria Juan N Corpas, Bogotá, Colombia.
[4] Medica General, Pontificie Universidad Javeriana, Bogotá, Colombia.
[5] Médico, Especialista Epidemiologia, Magister educación, Docente, Universidad Autónoma de Bucaramanga, Grupo de innovación e investigación Quirúrgica (GIIQ), Floridablanca, Santander, Colombia.

Monkeypox is a zoonosis caused by a double-stranded DNA virus of the genus orthopoxvirus. Monkeypox was first detected in humans in 1970 in the Democratic Republic of the Congo, since then most cases had been reported in rural regions of the tropical forests of the Congo Basin.[1] In 2003, the first outbreak of monkeypox outside of Africa occurred, and it took place in the United States, considering as a probable source of the origin of the virus, the importation of small mammals from Ghana to Texas, in addition to the notification of a total of 81 cases of monkeypox after close contact with domestic mammals of rodent predominance.[2] Subsequently, in 2018, 2019 and 2021 there were confirmed cases, without a major outbreak.

There is currently a large outbreak, which according to data published on May 25, 2022, the United Kingdom had a total of 71 confirmed cases of monkeypox, since May 7, 2022 when it reported its first case. Additionally, the European Union for the same date reported a total of 118 confirmed cases, spread over 12 states. Outside the European Union, confirmed cases have been reported in Canada, the United States, Australia, Switzerland, Israel and the United Arab Emirates.[3]

In Colombia, according to the Ministry of Health by June 23, 2022, three cases of monkeypox had been confirmed. Two adults of Colombian nationality identified in the city of Bogotá with a history of travel to Europe and a third case identified in the City of Medellín.[4]

Transmission of monkeypox can occur from animal to human (through contact with the bodily fluids of an infected animal or through a bite) and Human-Human, through direct contact with sores, scabs or infectious body fluids. Monkeypox causes a systemic disease that includes fever, chills, myalgia, and dermatological lesions, which are important when determining a diagnosis. The incubation period of monkeypox is usually 6 to 13 days, but can vary between 5 and 21 days.[5] Additionally, it is usually divided into two stages: the prodromal period and the skin rash **(Table 1)**. It is important to emphasize that, in the prodromal period, lymphadenopathies and the type of lesion in the rash period, are distinctive features

Address for correspondence
Dr. Gonzalo Andrés Domínguez Alvarado, Epidemiology Specialist, Professor, Autonomous University of Bucaramanga, Surgical Innovation and Research Group (GIIQ), Future Surgeons Chapter (ASCOL), Floridablanca, Santander, Colombia.
Email: gdominguez@unab.edu.co

Table 1 Symptoms according to the stage of infection by the Monkeypox.

Period	*Duration*	*Symptoms*
Prodromal period	Approximately five days	Fever, severe headache, back pain, myalgia, severe fatigue, and lymphadenopathies.
Rash	One to four days after the onset of fever and continues for a period of two to three weeks.	Skin Lesions: – Quantity: Few or thousands – Location: Face (95%), Palms, hands and soles feet (75%), oral mucous membranes (70%), genitals (30%) and conjunctivae (20%) – Evolution of lesions: · The rash typically begins as 2 to 5 mm diameter macules. · Papules, vesicles and then pustules. (Well circumscribed, deeply accentuated lesions often develop umbilication. · Crusty lesions that subsequently dry out and fall off (Usually occurs 7 to 14 days after the rash begins)

Figure 1 Monkeypox; 2 to 5 mm diameter macules; Papules, vesicles, and pustules; Crusty injuries.

Figure 2 Chickenpox; Vesicles of a few millimeters, pseudoumbilicate, with clear content, surrounded by an erythematous and very pruritic halo. The contents subsequently become purulent, forming pustules that break and form hemorrhagic crusts.

Figure 3 Herpes Zoster; herpetiform umbilicated vesiculation within a dermatome.

of monkeypox compared to other diseases that may initially appear similar (Chickenpox, Measles and Smallpox). By being clear about the clinical manifestations, both systemic and dermatological, of the patient, it allows to approach a diagnostic impression, which must be confirmed by means of a PCR (+) specific for orthopoxvirus.

Currently in Colombia there are no studies that speak specifically of the dermatological manifestations of the disease, so we wanted to make a small summary **(Figure 1-4)**, of the dermatological manifestations of both monkeypox and their most frequent differential diagnoses, since we believe that it is of utmost importance to differentiate these types of

Figure 4 Smallpox; Vesicles or pustules deep, firm/hard, round and well delimited; Lesions at the same stage of development (e.g., all are vesicles, or all are pustules) anywhere on the body.

eruptions in order to make an early diagnosis, fast and effective, which is reflected in a faster start of treatment, in addition to a more agile isolation and consequently a decrease in infections.

Finally, it is important to emphasize the current importance of dermatological manifestations in multiple epidemic diseases, a situation that must be considered by health faculties, clinics, and hospitals to carry out multiple trainings on dermatology, especially to general practitioners who represent the first line of care, this to improve and expedite diagnoses of pathologies that require immediate treatments.

References

1. Adler H, Gould S, Hine P, Snell LB, Wong W, Houlihan CF, et al. Clinical features and management of human monkeypox: a retrospective observational study in the UK. *Lancet Infect Dis*. 2022;**3099(22)**:1-10.
2. Factsheet for health professionals on monkeypox [Internet]. [cited 2022 Jun 28]. Available from: https://www.ecdc.europa.eu/en/all-topics-z/monkeypox/factsheet-health-professionals
3. Comunicado Técnico 2 - VS Fecha : Para: 27 de mayo de 2022 Entidades Territoriales De Salud E Instituciones Información Ante La Confirmación De Casos De Viruela Símica (Viruela Del Mono, Monkeypox) En El Mundo DE: 2022;1–8.
4. Minsalud e INS confirman tres casos de viruela símica en Colombia [Internet]. [cited 2022 Jun 28]. Available from: https://www.minsalud.gov.co/Paginas/Minsalud-e-INS-confirman-tres-casos-de-viruela-simica-en-Colombia.aspx
5. viruela del simio [Internet]. [cited 2022 Jun 29]. Available from: https://www.who.int/news-room/fact-sheets/detail/monkeypox
6. Signos y Síntomas, Viruela del mono, virus de la viruela, Centros para el Control y la Prevención de Enfermedades [Internet]. [cited 2022 Jun 30]. Available from: https://www.cdc.gov/poxvirus/monkeypox/symptoms.html
7. Fotos de la varicela | Centros para el Control y la Prevención de Enfermedades [Internet]. [cited 2022 Jun 30]. Available from: https://www.cdc.gov/chickenpox/about/photos.html
8. Martinón Sánchez JM, Martínez Soto S, Martinón-Torres F, Martinón Sánchez F. Sintomatología de la varicela. *An Pediatr*. 2003;**59(1)**:14–7.
9. Aggarwal A, Mehta S, Gupta D, Sheikh S, Pallagatti S, Singh R, et al. Clinical & immunological erythematosus patients characteristics in systemic lupus Maryam. *J Dent Educ*. 2012;**76(11)**:1532–9.
10. Evaluación de pacientes con viruela: protocolo de enfermedad de erupción vesicular o pustulosa aguda, generalizada viruela Centros para el Control y la Prevención de Enfermedades [Internet]. [cited 2022 Jun 30]. Available from: https://www.cdc.gov/smallpox/clinicians/algorithm-protocol.html.