

Vulvar demodicosis: a case report

Demodicosis vulvar: a propósito de un caso

Sirced Salazar^{1,2} , Verny D. Cedeño¹  , Ritha V. Bravo^{1,2*} 
Elizabeth Carballosa^{1,2} , Gustavo J. Palma¹ , Evelyn E. Loor¹ 

¹Especialidad en Anatomía Patológica, Universidad San Gregorio de Portoviejo, Manabí, Ecuador.

²Hospital Oncológico Dr. Julio Villacreses Colmont, Portoviejo, Manabí, Ecuador.

*Corresponding author.

Reception: 10-10-2025

Acceptance: 05-01-2026

Publication: 31-01-2026

ABSTRACT

Demodicosis is a cutaneous parasitic infection caused by the abnormal proliferation of mites of the genus *Demodex*, commonly found in the pilosebaceous follicles of the face, scalp, and trunk. It is generally an asymptomatic parasite; however, it is proposed that *Demodex* spp. contributes to the pathogenesis of certain dermatoses such as folliculitis, blepharitis, and rosacea. The occurrence of demodicosis in the genital areas is very rare and poorly documented. We present the case of a 32-year-old woman with no relevant medical history who presented with pain, erythema, and edema at the vaginal introitus, along with a nodular formation and Fordyce spots. Through clinicopathological correlation, a timely diagnosis of this cutaneous infection was made. The finding of multiple *Demodex* spp. in the sebaceous glands of the skin and the presence of Fordyce spots on the vulva strongly suggest the diagnosis of this condition. The relevance of recognizing this entity in cases of persistent lesions in the genital area is discussed.

Keywords: *Demodex folliculorum*, vulvar demodicosis, Fordyce spots, genital parasitosis.

RESUMEN

La demodicosis es una parasitosis cutánea ocasionada por la proliferación anómala de ácaros del género *Demodex*, comúnmente hallados en los folículos pilosebáceos de la cara, el cuero cabelludo y tronco. Generalmente es un parásito que no produce síntomas, sin embargo, se propone que el *Demodex* spp. contribuya a la patogénesis de ciertas dermatosis como la foliculitis, la blefaritis y la rosácea. La aparición de la demodicosis en zonas genitales es muy rara y escasamente documentada. Presentamos un caso de una mujer de 32 años de edad, sin antecedentes patológicos de relevancia que presentó a nivel del introito vaginal, dolor, eritema y edema con una formación nodular y manchas de Fordyce. Mediante la correlación clínico patológica, se pudo llegar al diagnóstico oportuno de esta infección cutánea. El hallazgo de múltiples *Demodex* spp. en las glándulas sebáceas de la piel y la presencia de manchas de Fordyce en la vulva, sugiere fuertemente el diagnóstico de esta patología. Se discute la relevancia del reconocimiento de esta entidad ante lesiones persistentes en la zona genital.

Palabras clave: *Demodex folliculorum*, demodicosis vulvar, manchas de Fordyce, parasitosis genital.

Cite as: Salazar, S., Cedeño, V. D., Bravo, R. V., Carballosa, E., Palma, G. J., & Loor, E. E. (2026). Vulvar demodicosis: a case report. *Revista Gregoriana de Ciencias de la Salud*, 3(1), 5-12. <https://doi.org/10.36097/rgcs.v3i1.3205>

© Author(s) 2026

INTRODUCTION

The first record of the *Demodex mite* dates back to 1841, when the German anatomist Jacob Henle observed it in human specimens under a microscope. Subsequently, in 1842, Carl Gustav Simon successfully classified it within the mite group, recognizing its presence as a common finding on human skin (Marcinowska et al., 2015). Human demodicosis is considered a disease of the pilosebaceous unit associated with *Demodex folliculorum* and *Demodex brevis* (Królik et al., 2020).

D. folliculorum usually inhabits the skin of the face, while *D. brevis* is also found in the skin of the trunk, within the sebaceous glands. Although its presence is asymptomatic in most individuals, in certain cases, it can trigger a cutaneous inflammatory response with clinical manifestations that mimic other common dermatoses, such as rosacea, perioral dermatitis, or folliculitis, which complicates its diagnosis and understanding (Forton, 2022).

Chen & Plewig (2014) propose a classification of human demodicosis into two main clinical forms: primary and secondary. The primary form is characterized by a pathological proliferation of *D. folliculorum* in the absence of pre-existing or associated inflammatory dermatological diseases, classically affecting the facial region.

In contrast, secondary demodicosis occurs more frequently in individuals with immunosuppressed states, whether systemic or localized, which facilitates the uncontrolled proliferation of these mites (Forton et al., 2015).

Clinical presentation in non-seborrheic areas, such as mucous membranes or the genital region, is extremely rare and poorly documented. Demodicosis of the vulvar mucosa is an uncommon site, with few reports in the medical literature. Since the labia minora do not have well-developed sebaceous glands, the presence of *Demodex* in this area suggests an alternative mechanism for colonization or transmission. One possible route would be autoinoculation due to manual contact or contaminated objects, especially in contexts of poor hygiene or immunodeficiency (Akkaş et al., 2022).

CLINICAL CASE DESCRIPTION

A 33-year-old female patient with no relevant personal, surgical, or family medical history.

She denied any gynecological or obstetric history and had a negative human papillomavirus (HPV) genotype. She presented with a two-month history of pain and swelling in the genital area. Gynecological examination revealed a reddish, tender, nodular lesion measuring 3 x 5 mm at the vaginal introitus, accompanied by erythema, edema, and small yellowish-white bumps up to 2 millimeters in diameter. Biopsies were performed for histopathological examination.

Two fragments of dark brown tissue, measuring 0.3 to 0.5 cm and fibroelastic consistency, were received in formalin. On sectioning, it was homogeneous white. Microscopically, it was composed of a non-keratinized stratified squamous epithelium, with multiple sebaceous lobules and an absence of hair follicles, consistent with Fordyce spots (Figure 1).

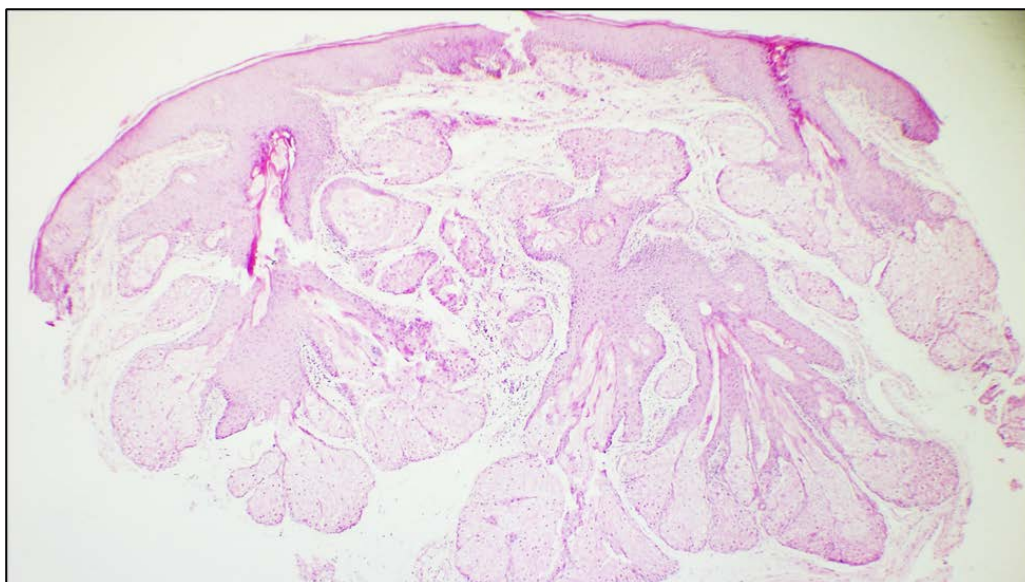


Figure 1. Histological section of vulvar mucosa, with visible ectopic normal sebaceous glands without hair follicles, compatible with Fordyce granules or spots (H&E 4X).

In addition, small granulomatous nodules with chronic inflammatory infiltrate were observed surrounding remnants of squamous epithelium and sebaceous glands (Figure 2). In the deeper layers, most of the sebaceous lobules were infiltrated by mites of the genus *Demodex*, located both in the superficial ducts and in the basal portions of these lobules (Figure 3). Subsequently, the patient attended follow-up appointments with her gynecologist, receiving oral antiparasitic treatment, with good clinical progress.

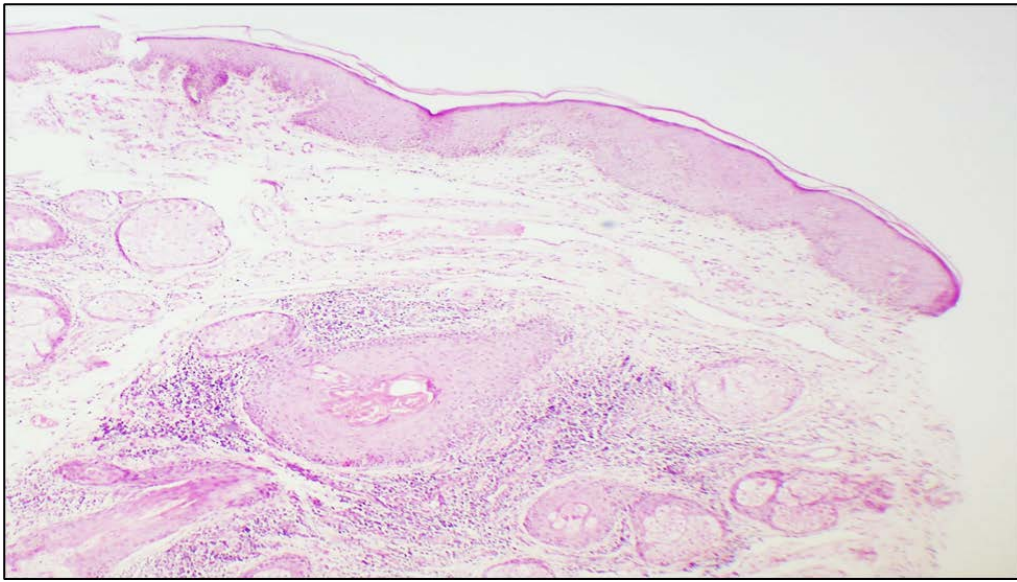


Figure 2. Histological section of vulvar mucosa with a nodular lesion with lymphoplasmacytic infiltrate surrounding sebaceous glands and remnants of squamous epithelium (H&E 4X).

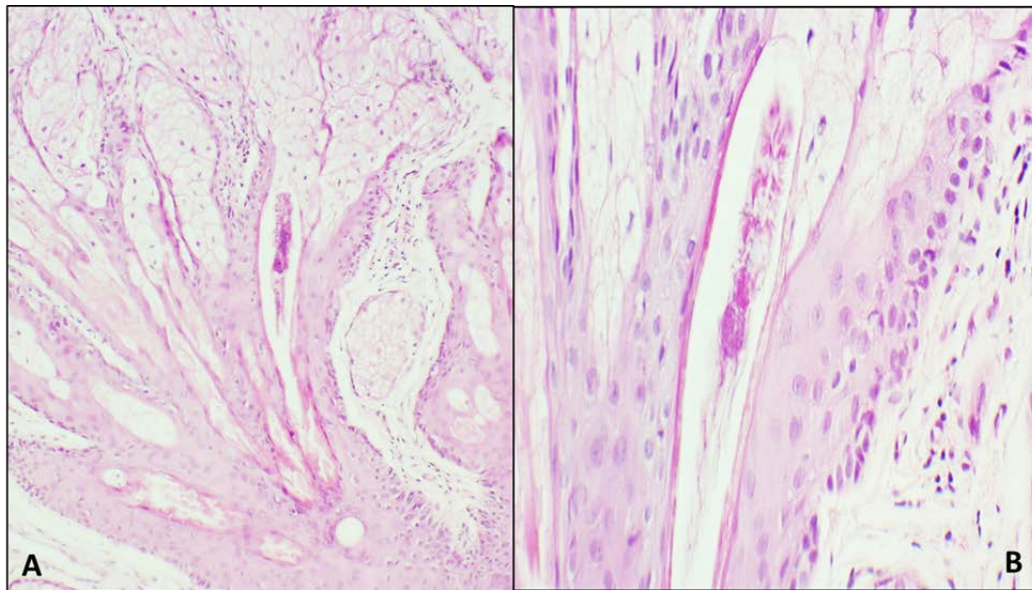


Figure 3. Histological section of vulvar mucosa. Sebaceous lobule infiltrated by a mite of the genus *Demodex*. (A: 10X and B: 40X; H&E).

This case report was prepared in accordance with the principles of the Declaration of Helsinki (World Medical Association, 2024) and international ethical standards for biomedical

research. The confidentiality of the patient's clinical and personal information was guaranteed, avoiding any identifying data in the text, images, or supplementary materials.

DISCUSSION

Demodicosis is a parasitic disease that affects the pilosebaceous unit, primarily on the face and scalp, and less frequently on the trunk and external genitalia. The presence of this skin infection in the vaginal introitus is even rarer, with a poorly documented prevalence. Currently, only one case of demodicosis has been reported. vulvar, as reported in the study by Hedberg et al. (2020).

However, Barret & Carlson (2014) conducted a retrospective study examining 34 biopsies from labiaplasty procedures performed for labial hypertrophy. Only 1 of the 34 specimens showed histopathological evidence of *Demodex* spp., within the hyperplastic sebaceous glands in the labia minora.

In this case, the demodicosis was located in the vaginal introitus and labia minora, which was confirmed by histopathological examination. This location is unusual, given that the labia minora and vaginal mucosa lack sebaceous glands, the typical habitat of *Demodex* mites. According to the review of the available literature, this finding would correspond to the second documented case with histologically confirmed vulvar involvement, which reinforces the rarity of this clinical presentation.

Demodicosis is generally asymptomatic, and the pathogenic potential of this mite remains controversial, given its ubiquitous presence on human skin. However, several mechanisms have been proposed that could explain its involvement in the development of signs and symptoms. These include: blockage of hair follicles or sebaceous ducts by *Demodex*, secondary reactive hyperkeratosis, and activation of the immune system triggered by the presence of the mite and its waste products. This immune response can generate a foreign body granulomatous inflammatory reaction (Baima & Sticherling, 2002).

A biopsy of the affected skin surface is the gold standard for diagnosing demodicosis, as it allows for histopathological confirmation of the mite in the sebaceous glands. This is confirmed in a retrospective study by Hsu et al. (2009), who highlighted its high sensitivity and specificity in

atypical cases or those with unusual locations. In our case, it manifested as a granulomatous nodular lesion accompanied by erythema, pain, and local edema.

In addition to the diagnostic challenges involved in demodicosis This case, involving the vulva, invites consideration of bioethical aspects in medical practice. The recommendation to perform a biopsy in the genital area, for example, requires clear and direct informed consent, based on the principles of autonomy and non-maleficence. This process allowed the patient to understand the importance of the procedure and its analysis for achieving a correct diagnosis, avoiding delays or inappropriate treatments.

On the other hand, publishing rare cases like this one aligns with the principle of justice, as it provides information that could benefit other patients in similar situations, particularly in places where reports of these parasitic infections are scarce. The way the case is presented, maintaining confidentiality and without identifying data, strikes a balance between the duty of scientific dissemination and respect for human dignity (World Medical Association, 2024; Council for International Organizations of Medical Sciences & World Health Organization, 2002).

CONCLUSIONS

The *Demodex* mite has been identified as a commensal inhabitant of the hair follicles of human skin, especially in areas with abundant sebaceous glands such as the face and scalp. Despite its ubiquitous nature, *Demodex* can behave as an opportunistic pathogen, triggering inflammatory skin processes that mimic other dermatoses, thus complicating its clinical diagnosis. The appearance of demodicosis in non-seborrheic areas, such as the vulvar mucosa, is an unusual and underreported manifestation. Skin biopsy is the gold-standard examination for diagnosing this parasitic infection due to its high sensitivity and specificity.

ACKNOWLEDGMENTS

The authors would like to thank the Pathology Department of the “Dr. Julio Villacreses Colmont” Cancer Hospital for the images obtained using hematoxylin and eosin plates.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

AUTHOR CONTRIBUTIONS

Conceptualization: Verny D. Cedeño, Ritha V. Bravo, Sirced Salazar, and Elizabeth Carballosa. **Data curation:** Verny D. Cedeño, Gustavo J. Palma, and Sirced Salazar. **Formal analysis:** Sirced Salazar, Ritha V. Bravo, and Elizabeth Carballosa. **Investigation:** Verny D. Cedeño. **Methodology:** Verny D. Cedeño, Ritha V. Bravo, Sirced Salazar, and Elizabeth Carballosa. **Project administration:** Verny D. Cedeño and Sirced Salazar. **Software:** Verny D. Cedeño, Evelyn E. Loor, and Gustavo J. Palma. **Supervision:** Sirced Salazar. **Validation:** Sirced Salazar, Ritha V. Bravo, and Elizabeth Carballosa. **Visualization:** Sirced Salazar. **Writing – original draft:** Verny D. Cedeño. **Writing – review & editing:** Verny D. Cedeño and Sirced Salazar.

REFERENCES

- Akkaş, Ö., Aydemir, S., Gürbüz, E., Coşkun, S., Ekici, A., Halidi, A. G., & Çeviker, S. A. (2022). Relación de los ácaros Demodex en inmunodeficiencia, rosacea, blefaritis y algunos hallazgos clínicos. *Revista de Ciencias de la Salud del Mar Negro Medio*, 8(4), 525-532. <https://doi.org/10.19127/mbsjohs.1126190>
- Baima, B., & Sticherling, M. (2002). Demodicidosis revisited. *Acta Dermato-Venereologica*, 82(1), 3–6. <https://doi.org/10.1080/000155502753600795>
- Barrett, M. M., & Carlson, J. A. (2014). A clinicopathologic study of labia minora hypertrophy: signs of localized lymphedema were universal. *Journal of Lower Genital Tract Disease*, 18(1), 13-20. <https://doi.org/10.1097/LGT.0b013e31828d3989>
- Chen, W., & Plewig, G. (2014). Human demodicosis: revisit and a proposed classification. *British journal of dermatology*, 170(6), 1219-1225. <https://doi.org/10.1111/bjd.12850>
- Council for International Organizations of Medical Sciences & World Health Organization. (2002). *Pautas éticas internacionales para la investigación biomédica en seres humanos*. Ginebra: CIOMS. <https://bit.ly/4qbmCg4>
- Forton, F. M. N. (2022). Rosacea, an infectious disease: why rosacea with papulopustules should be considered a demodicosis. A narrative review. *Journal of the European Academy of Dermatology and Venereology*, 36(7), 987-1002. <https://doi.org/10.1111/jdv.18049>
- Forton, F. M. N., Germaux, M. A., Thibaut, S. C., Stene, J. J., Brasseur, T. V., Mathys, C. L., & Laporte, M. F. (2015). Demodicosis: clasificación descriptiva y estado de la rosácea, en

- respuesta a la clasificación previa propuesta. *Revista de la Academia Europea de Dermatología y Venereología*, 29(4), 829-832. <https://doi.org/10.1111/jdv.12926>
- Hedberg, M. L., Chibnall, R. J., & Compton, L. A. (2020). Symptomatic vulvar demodicosis: A case report and review of the literature. *Journal of cutaneous pathology*, 47(11), 1063-1066. <https://doi.org/10.1111/cup.13816>
- Hsu, C. K., Hsu, M. M. L., & Lee, J. Y. Y. (2009). Demodicosis: a clinicopathological study. *Journal of the American academy of dermatology*, 60(3), 453-462. <https://doi.org/10.1016/j.jaad.2008.10.058>
- Królik, S., Muth, A., Polańska, A., Żaba, R., Adamski, Z., & Jenerowicz, D. (2020). Demodicosis in humans as a current problem in dermatology and ophthalmology. *Journal of Face Aesthetics*, 3(2), 108-121. <https://doi.org/10.20883/jofa.36>
- Marcinowska, Z., Kosik-Bogacka, D., Łanocha-Arendarczyk, N., Czepita, D., & Łanocha, A. (2015). Demodex folliculorum and demodex brevis. *Pomeranian journal of life sciences*, 61(1), 108-114. <https://ojs.pum.edu.pl/pomjlifesci/article/view/62>
- World Medical Association (2024). WMA Declaration of Helsinki: *Ethical Principles for Medical Research Involving Human Subjects*. 75th WMA General Assembly, Helsinki, Finland. <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>

Disclaimer / Editor's Note: All publications' statements, opinions, and data are solely those of the individual authors and contributors, not *Revista Gregoriana de Ciencias de la Salud* or the editors. *Revista Gregoriana de Ciencias de la Salud* and/or the editors disclaim all responsibility for any injury to persons or property resulting from any ideas, methods, instructions, or products referred to in the content.