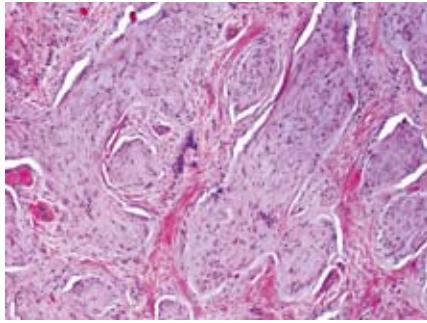


**Figure 2.**

At higher magnification, the nodular structures are seen to be made up of spindle cells with a single nucleus, located between bundles of collagen (hematoxylin-eosin,  $\times 20$ ).

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**Conflicts of Interest**

The authors declare no conflicts of interest.

**References**

1. Fetsch JF, Brinsko RW, Davis CJ Jr, Mostofi FK, Sesterhenn IA. A distinctive myointimal proliferation («myointimoma») involving the corpus spongiosum of the glans penis: a clinicopathologic and immunohistochemical analysis of 10 cases. *Am J Surg Pathol.* 2000; 24:1524-30.
2. McKenney JK, Collins MH, Carretero AP, Boyd TK, Redman JF, Parham DM. Penile myointimoma in children and adolescents: a clinicopathologic study of 5 cases supporting a distinct entity. *Am J Surg Pathol.* 2007;31:1622-36.
3. Katona TM, López-Beltrán A, MacLennan GT, Cheng L, Montironi R, Cheng L. Soft tissue tumors of the penis: a review. *Anal Quant Cytol Histol.* 2006;28:193-206.
4. Val-Bernal JF, Garijo MF. Solitary cutaneous myofibroma of the glans penis. *Am J Dermatopathol.* 1996;18:317-21.
5. Robbins JB, Kohler S. Penile nodule in a 54-year-old man: a case of a myointimoma. *J Am Acad Dermatol.* 2005;53:1084-6.
6. Vardar E, Gunlusoy B, Arslan M, Kececi S. Myointimoma of the glans penis. *Pathol Int.* 2007;57:158-61.

## Spinulosis as a Manifestation of Demodicosis

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*To the Editor:*

Hyperkeratotic spicules are rare skin lesions of unknown origin, defined by the presence of multiple areas of circumscribed hyperkeratosis formed of keratotic material that protrudes from the stratum corneum.<sup>1</sup> The



**Figure 1.** Multiple, filiform, follicular hyperkeratotic lesion on the left cheek.

lesions are seen particularly on the face. The disorder may be idiopathic or associated with various diseases such as hypovitaminosis A, chronic renal failure, Crohn disease, lymphoma, monoclonal gammopathy, and multiple myeloma.<sup>1,2</sup>

In this letter, we would like to report the case of a 43-year-old woman seen in our department with multiple hyperkeratotic spicules on the left cheek. Histopathology revealed keratotic material and multiple *Demodex folliculorum* in the dilated follicular infundibula.

The patient was a 43-year-old woman with a past history of depression and fibrocystic disease of the breast. She was seen for a 1-year history of multiple, asymptomatic lesions on the left cheek. The patient denied using cosmetics and had not performed any treatment except for facial cleansing with soap and water twice a day.

On examination, there were dozens of yellowish-white, filiform, follicular hyperkeratotic spicules of 1-to-3 mm in height on the left cheek (Figure 1). There was no diffuse facial erythema and there were no similar lesions on other areas of the body.

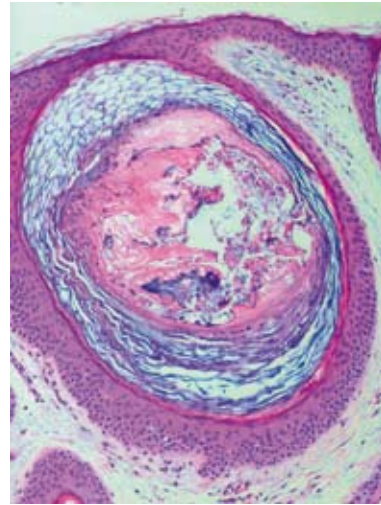
The laboratory studies performed included complete blood count, biochemistry, protein electrophoresis, alkaline

phosphatase,  $\beta$ 2-microglobulin, autoantibodies, thyroid hormones, and serology for hepatitis B virus, hepatitis C virus, and human immunodeficiency virus (HIV); all results were normal or negative. A biopsy was taken, and histopathological study revealed follicular infundibula occupied by keratin and remnants of *D. folliculorum* (Figure 2).

Complete resolution of the lesions was achieved by the daily application of 5% permethrin cream for 2 weeks.

*D. folliculorum* is a saprophytic mite that lives in the hair follicles. Prevalence varies between 10% and 50%, depending on the series.<sup>3</sup> Predisposing factors for *Demodex* infestation include age (all elderly individuals are infested), certain hygiene habits, exposure to ultraviolet A and B radiation, the use of topical corticosteroids, metabolic disorders (diabetes mellitus), and states of immunosuppression (HIV, hematologic cancer, and topical or systemic immunosuppressants).<sup>4</sup> Their presence in the skin is considered pathological when: a) they reach a density greater than or equal to 5 mites per cm<sup>2</sup>, b) they are located in the dermis, or c) there is a response to antidemodex treatment (topical treatments such as 0.75% metronidazole, 5% permethrin, crotamiton, 10% benzyl benzoate, or salicylic acid, and oral treatments such as metronidazole, retinoids, or ivermectin).<sup>5</sup> The clinical conditions with which infestation is associated are very variable: pityriasis folliculorum, rosacea-like demodicosis, demodicosis gravis (similar to severe granulomatous rosacea), rosacea, perioral dermatitis, blepharitis, pustular folliculitis (facial, though possibly more widespread in immunosuppressed patients), eosinophilic folliculitis, papulopustular rashes of the scalp, solitary granuloma, facial rash after phototherapy, facial hyperpigmentation, and others.<sup>3,5-7</sup>

Recently, there have been a number of reports of cases of facial spinulosis in which the histology has showed



**Figure 2.** Follicular infundibulum occupied by keratotic material and remnants of *Demodex folliculorum* (hematoxylin-eosin,  $\times 100$ ).

the presence of this mite and, curiously, all the patients described in the reports suffered from polycythemia vera (Table).<sup>8-10</sup> The role of *Demodex* in the pathogenesis of this disorder is a source of controversy: in some cases no causative relationship was demonstrated due to the absence of clinical improvement with treatment and the presence of the mite in both healthy and diseased skin<sup>9</sup>; in another case, resolution of the skin condition was only achieved by the interruption of treatment with hydroxyurea, and the authors considered that *Demodex* infestation was the result of the immunosuppressive effect of this drug.<sup>10</sup> In our patient, the main disorder included in the differential diagnosis was *Demodex*-induced pityriasis folliculorum. This is characterized by follicular papules in the form of follicular plugs associated with dry scaling and diffuse facial erythema, giving rise to pruritus and a burning sensation; it is more common in women with poor facial

**Table.** Patients With Facial Spinulosis Associated With Multiple *Demodex folliculorum* in Dilated Follicular Infundibula

Reference	Age/Sex	Past History	Interval <sup>a</sup>	Site	Treatment (Response)
Fariña et al <sup>8</sup>	78 y/F	Polycythemia vera	2 wk	Face (mostly on the cheeks)	1% permethrin cream (FR)
Ballesteró Díez et al <sup>9</sup>	76 y/F	Polycythemia vera, hypertension and DM	2 y	Face (mostly on the temporal and frontal regions, cheeks, chin, and ears)	5% permethrin cream (NR), 0.75% metronidazole cream (NR). Metronidazole po (NR)
Boutli et al <sup>10</sup>	71 y/M	Polycythemia vera	6 m	Both cheeks	1% metronidazole cream (NR). Metronidazole po (NR). Argon laser (NR). Isotretinoin po (NR). Withdrawal of hydroxyurea (R)
Monteagudo et al (present case)	43 y/F	Depression and fibrocystic disease of the breast	1 y	Left cheek	5% permethrin cream (FR)

Abbreviations: DM, diabetes mellitus; F, female; FR, favorable response to treatment; M, male; NR, no response to treatment.

<sup>a</sup> Time course of the lesions.

hygiene or inappropriate use of soaps, makeup-removing solutions, and creams.<sup>4,6</sup>

In conclusion, we present a new patient with follicular spicules on the face, with the presence of *Demodex* on histological study. We consider there to be a proven causative relationship because of clinical resolution after the application of permethrin.

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#### Conflict of Interest

The authors declare no conflicts of interest

## References

1. Kim TY, Park YM, Jang IG, Yi JY, Kim CW, Song KY. Idiopathic follicular hyperkeratotic spicules. *J Am Acad Dermatol*. 1997;36:476-7.
2. García Romero D, Sanz Robles H, Arrue I, Sánchez Largo ME, Rodríguez Peralto JL, Vanaclocha F. Queratosis folicular y mieloma múltiple. *Actas Dermosifiliogr*. 2006;97:599-602.
3. Baima B, Sticherling M. Demodicidosis revisited. *Acta Derm Venereol*. 2002;82:3-6.
4. Kulac M, Ciftci IH, Karaca S, Cetinkaya Z. Clinical importance of *Demodex folliculorum* in patients receiving phototherapy. *Int J Dermatol*. 2008;47:72-7.
5. Serrano Falcón C, Serrano Ortega S. *Demodex folliculorum*. *Monogr Dermatol*. 2005;18:41-7.
6. Dominey A, Tschen J, Rosen T, Batres E, Stern JK. Pityriasis folliculorum revisited. *J Am Acad Dermatol*. 1989;21:81-4.
7. Urbina F, Plaza C, Posada C. Folliculitis por *Demodex folliculorum*: forma pigmentada. *Actas Dermosifiliogr*. 2003;94:119-20.
8. Fariña MC, Requena L, Sarasa JL, Martín L, Escalonilla P, Soriano ML, et al. Spinulosis of the face as a manifestation of demodicidosis. *Br J Dermatol*. 1998;138:901-3.
9. Ballesteros Díez M, Daudén E, Ruiz Genao DP, Fraga J, García Díez A. Presence of *Demodex* in follicular hyperkeratotic spicules on the face. A casual association? *Acta Derm Venereol*. 2004;84:407-8.
10. Boutli F, Delli FS, Mourellou O. Demodicidosis as spinulosis of the face—a therapeutic challenge. *J Eur Acad Dermatol Venereol*. 2007;21:273-4.

## Cutaneous Sclerosing Perineurioma

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#### To the Editor:

The perineurium is a structure that surrounds and protects nerve fascicles, and is formed of groups of flattened cells well organized into 1 or more layers. These cells are characterized by expression of epithelial membrane antigen (EMA), vimentin, collagen IV, laminin, and CD99, and they are negative for S-100 and neurofilaments. Ultrastructurally, they present pyknotic vesicles, elongated cytoplasmic processes with a discontinuous basal lamina, scattered intermediate filaments, and rudimentary intercellular junctional complexes. Perineurioma is a rare, benign neoplasm first described in 1978.<sup>1</sup> It is derived from the perineural cells in the absence of other elements of the nerve sheath. There are 2 main variants, intraneural and soft-tissue perineurioma, which share cytologic, ultrastructural, and immunohistochemical features with perineural cells, but present significant clinical and histological differences. Recently, a third variant called cutaneous sclerosing perineurioma has been described; this tumor typically affects the fingers and palms of young patients.

We present the case of a 54-year-old woman with no past history of interest. She was seen for a common wart

on the palm of the right-hand, which had been treated by electrocoagulation. On examination, 2 fibrous papules of 3 mm diameter were also observed on the palmar surface of both thumbs (Figure 1). The patient stated that they had been present for more than 20 years and that she had not sought medical care because they were stable and asymptomatic. Excision biopsy of the 2 papules showed similar findings: a well-defined but nonencapsulated proliferation formed of nodules (Figure 2) that, on greater magnification, showed a concentric (onion skin) pattern of spindle-shaped cells and a few epithelioid cells, with no atypia, in a dense collagen stroma (Figure 3A). Immunohistochemical analysis showed similar patterns in the cells making up the 2 nodular whorls, with intense EMA (Figure 3B) and vimentin expression. The other antibodies studied—cytokeratins, S-100, smooth-muscle actin, desmin, CD31, CD34, and factor XIIIa—were negative. The diagnosis was of multiple cutaneous sclerosing perineurioma.

Cutaneous sclerosing perineurioma is a benign tumor first described in 1997 by Fetsch and Miettinen.<sup>2</sup> Approximately 40 cases have been reported in the English-language