and bacillary angiomatosis.[2,8] The differentiation between CAEN and ALHE is based on both clinical and histopatologic criteria. Clinically ALHE occurs on the head and neck, and often presents as a cluster of lesions, whereas CAEN occurs predominantly on the trunk, and typically occurs as a single lesion. Histologically ALHE affects the deep dermis and hypodermis, is multilobular, and is predominantly vasoformative, whereas CAEN tends to be situated in the superficial dermis, is unilobular, and is usually solid. Furthermore, ALHE has a greater inflammatory component, the eosinophil count is higher, and there is a more abundant stroma.[2] Epithelioid angiosarcoma should also be included in the differential diagnosis. Despite its more aggressive biological behavior, it shares certain morphological characteristics with CAEN that could lead to diagnostic error. Epithelioid angiosarcoma, however, is not so well circumscribed, and often presents with a large necrotic mass or smaller patches of necrosis. Moreover, nuclear atypia is conspicuous, with nuclear pleomorphism and atypical mitoses.[9] Immunohistochemistry is useful because up to 50% of epithelioid angiosarcomas are cytokeratin-positive, whereas CAEN is cytokeratin-negative.[2]Epithelioid hemangioendothelioma is a low-grade angiosarcoma that may be included within the spectrum of vascular lesions with epithelioid characteristics. Compared to CAEN lesions, epithelioid hemangioendothelioma lesions are larger, less well defined, and deeper. Histologically, the vessels in epithelioid hemangioendothelioma are not well defined, and the growth has a fibromyxoid stroma[9] similar to metastases from a carcinoma. Up to 25% of cases are cytokeratin-positive.[2] Bacillary angiomatosis typically affects immunosuppressed patients—for example, those with the human immunodeficiency virus[2]—and presents as multiple eruptive vascular lesions. Histologically, it has a lobular pattern with a conspicuous proliferation of capillaries separated by connective tissue septa. The endothelial cells lining the vessels are large, with an epithelioid appearance, and they protrude into the vascular lumens. Bacillary angiomatosis is further characterized by a neutrophil infiltration, and aggregates of granular material corresponding to bacterial colonies (*Bartonella henselae*).[3] Although the pathogenesis of CAEN is unknown, its rapid development, the presence of epidermal hyperplasia, and the inflammatory response would suggest it is a reactive disorder.[4]

References

1. Brenn T, Fletcher CD. Cutaneous epithelioid angiomatous nodule: a distinct lesion in the morphologic spectrum of epithelioid vascular tumors. Am J Dermatopathol. 2004;26: 14-21.
2. Requena Caballero C, Nicolau MJ, Haro R, Martorell A, Sanmartín O, Llombart B. Proliferative cutaneous epithelioid angiomatous nodule. Actas Dermosifiliogr. 2009;100:137-41.
3. Solís-García E, Segura-Sánchez JM, Rodríguez-Enríquez B, Sánchez-Sánchez-Vizcaíno F, González-Serrano MT. Nódulo angiomatoso epitelioide cutáneo. ¿Variante superficial y extrafacial de hemangioma epitelioide? Rev Esp Patol. 2006;39:59-62.
4. Álvarez-Argüelles-Cabrera H, Guimera-Martín-Neda F, Carrasco JL, García-Castro MC, Hernández-León CN, Díaz-Flores L. Cutaneous epithelioid angiomatous nodule. J Eur Acad Dermatol Venereol. 2008;22:1383-5.
5. Zamecnik M. Relationship between cutaneous epithelioid angiomatous nodule and epithelioid hemangioma. Am J Dermatopathol. 2004;26:351-2.
6. Fernández-Flores A. D2-40 and cutaneous epithelioid angiomatous nodule. Am J Dermatopathol. 2008;30:302-4.
7. Al-Daraji WI, Prescott RJ, Abdellaoui A, Khan MM, Kulkarni K, Youssef MM. Cutaneous epithelioid angiomatous nodule: different views or interpretations in the analysis of ten new cases. Dermatol Online J. 2009;15:2.
8. Fernández-Flores A, Montero MG, Renedo G. Cutaneous epithelioid angiomatous nodule of the external ear. Am J Dermatopathol. 2005;27:175-6.
9. Sangüeza OP, Walsh SN, Sheehan DJ, Orland AF, Llombart B, Requena L. Cutaneous epithelioid angiomatous nodule: a case series and proposed classification. Am J Dermatopathol. 2008;30:16-20.

J.M. Segura-Palacios,[a,*] E. Gómez-Moyano,[a] A. Hiraldo-Gamero,[a] A. Sanz-Trelles[b]

[a]*Servicio de Dermatología y Anatomía Patológica, Complejo Hospitalario Carlos Haya, Málaga, Spain*
[b]*Servicio de Anatomía Patológica, Complejo Hospitalario Carlos Haya, Málaga, Spain*

*Corresponding author.
E-mail address: juanmanuelo_1983@hotmail.com (J.M. Segura-Palacios).

Dermoscopy in Furuncular Myiasis

Dermatoscopia en la miasis forunculoide

To the Editor:

We report the case of a 40-year-old Peruvian man who came to our clinic because of the appearance, 2 to 3 weeks earlier, of papular lesions in the left pectoral region. The lesions had persisted despite drainage and subsequent treatment with erythromycin, ciprofloxacin, and cloxacillin for 10 days. They had appeared a few days before the patient returned from a 21-day stay in Minas Gerais, Brazil. He stated that there were initially 6 to 7 lesions that he described as insect bites, and that, during the week prior to consultation, there had been soreness and stinging in the 2 persistent lesions. Physical examination revealed 2 indurated papules that were 0.5 and 2 cm in diameter in the left pectoral region;

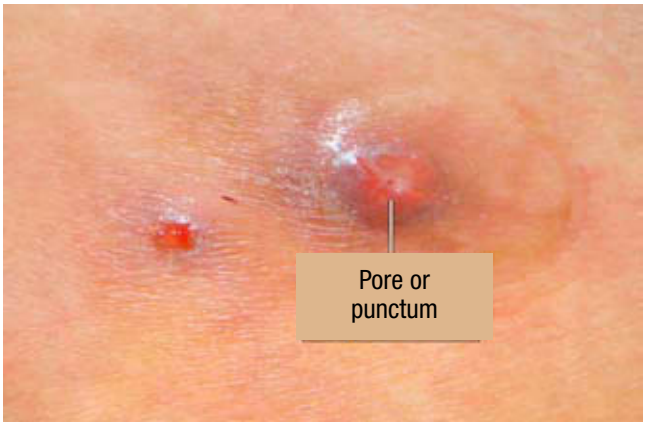

Figure 1 Papule and plaque of 0.5 and 2 cm diameter, respectively, with well-defined borders and central erosions. The larger lesion has a very small orifice.

the lesions were close to each other but not confluent and had violaceous borders and a yellowish central area with erosions and a very small central orifice (Figure 1). Bubbles escaping sporadically through this orifice led us to perform dermoscopy, which after a few minutes revealed the presence of a larva within each lesion, evidenced by the movement of the posterior spiracles that emerged repeatedly through the central orifice (Figure 3). We occluded the respiratory pore with petroleum jelly and a transparent plastic dressing and, 24 hours later, used forceps to extract 2 larvae (1 from each lesion), identified by our microbiology department as second-stage larvae of *Dermatobia hominis* (Figure 2). The lesions disappeared within 1 week, leaving slight residual hyperpigmentation.

Furunculoid myiasis caused by *D. hominis*, a disease mainly imported from South America, presents with a small number of papular lesions, often preceded by bites of several mosquito species. The mosquitoes act as vectors of the parasite's eggs, carrying them attached to their abdomen. This type of oviposition, known as phoresis, is unique to *D. hominis*.[1] The lesions increase in size for 3 weeks due to the progressive growth of the larvae, which have a total development period of 6 to 12 weeks. The larvae remain tightly bound to the host by various rings of chitin hooks,[2] forming well-defined nodules that are similar to boils but that have a firm consistency. At this stage we can sometimes observe a cream-colored central area corresponding to the posterior segments or respiratory spiracles of the larva. Diagnosis is fundamentally clinical and is based on visualization of the parasite. Differential diagnosis includes boils, epidermoid cysts, and abscesses. Several articles have been published on methods for visualizing the larva in vivo. Breast ultrasound reveals hyperechoic masses surrounded by a hypoechoic halo.[3] Doppler ultrasound identifies the number and position of the larvae in the lesion and may be useful in doubtful cases.[4] Artifacts in T2-weighted magnetic resonance images have also been described and

Figure 2 Second-stage larva of *Dermatobia hominis*. The image shows its characteristic bottle shape and the presence of several black rings of chitin hooks.

could correspond to intracerebral migration of *D. hominis* larvae through an open fracture.[5] However, in the latter case the lack of histological confirmation of the infestation and the existence of other potentially invasive myiases should make us consider these images as suggestive of infestation with a possible relationship with a previous furuncular myiasis. Dermoscopy can help to confirm the suspected diagnosis in such lesions by providing clearer visualization of the parasite,[6] as occurred in our case. We recommend maintaining the dermatoscope on the lesion for several minutes, because occlusion of the respiratory orifice stimulates the emergence of the caudal end of the larva, possibly to improve its oxygenation. This method allows the parasite to be seen in motion, clearly showing the structures corresponding to the posterior spiracles. In addition, the widespread availability and immediacy of dermoscopy makes it a particularly appropriate tool for the diagnosis of these lesions.

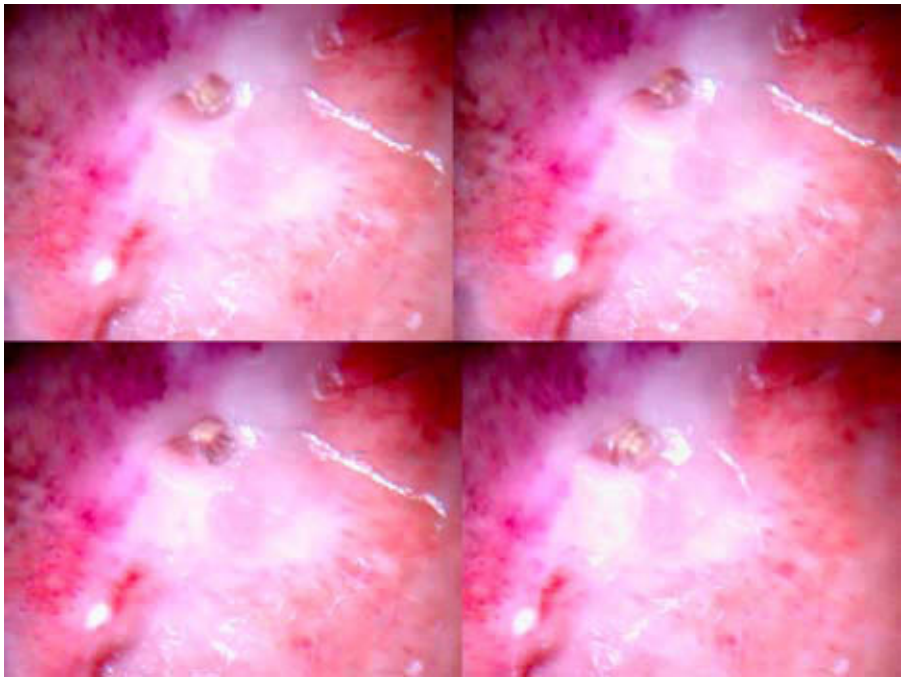

Figure 3 Dermoscopy (original magnification ×15) performed with DermLite Pro (3Gen, LLC, San Juan Capistrano, CA, USA) coupled to a Sony DSC-T200 camera of 8.1 MP: central fibrous tissue and peripheral red blood cells. In the center, a long, yellow structure formed by 2 finger-like projections corresponds to the caudal segment with the posterior or respiratory spiracles of a *Dermatobia hominis* larva.

References

1. Contreras-Ruiz J, Arenas-Guzman R, Vega-Memije ME, Castillo-Díaz M. Furunculoid myasis due to Dermatobia hominis. A case imported to the Mexican capital's Federal District from Costa Rica. Gac Med Mex. 2004;140:81-3.
2. Mohrenschlager M, Mempel M, Weichenmeier I, Engst R, Ring J, Behrendt H. Scanning electron microscopy of Dermatobia hominis reveals cutaneous anchoring features. J Am Acad Dermatol. 2007;57:716-8.
3. De Barros N, D'Avila MS, de Pace Bauab S, Issa FK, Freitas FJ, Kim SJ, et al. Cutaneous myiasis of the breast: mammographic and US features—report of five cases. Radiology. 2001;218:517-20.
4. Quintanilla-Cedillo MR, León-Urena H, Contreras-Ruiz J, Arenas R. The value of Doppler ultrasound in diagnosis in 25 cases of furunculoid myiasis. Int J Dermatol. 2005;44:34-7.
5. Marco de Lucas E, Díez C, Gutiérrez A, Montiaga F, Arnaiz J, Mandly AG, et al. Unusual MRI findings in a patient with history of frontal fracture and skin infestation by fly larvae, as a possible sign of intracerebral myiasis. Clin Neurol Neurosurg. 2008;110:725-8.
6. Bakos RM, Bakos L. Dermoscopic diagnosis of furuncular myiasis. Arch Dermatol. 2007;143:123-4.

M. Llamas-Velasco,* R. Navarro,
D. Santiago Sánchez-Mateos, D. De Argila

Servicio de Dermatología,
Hospital Universitario de la Princesa, Madrid, Spain

*Corresponding author.
E-mail address: mar.llamasvelasco@gmail.com
(M. Llamas-Velasco).

Chemical Burn from an Airbag

Quemadura química por airbag

To the Editor:

Airbags are a safety mechanism proven to be effective in reducing the severity and fatality of traffic accidents.[1] Nevertheless, airbag deployment has induced multiple injuries; superficial abrasions, contusions, lacerations, and thermal and chemical burns are the most common.[2-4]

A 21-year-old man was seen by the dermatologist on duty for facial burns and eye injury secondary to the sudden deployment and rapid inflation of the airbag in the vehicle he was driving. The injuries consisted of a well-delimited plaque on the forehead, with a very superficial, erosive appearance, sparing the deeper parts of the forehead