

In both cases the treatment chosen was Mohs micrographic surgery. The differential diagnosis of EMPD in the frontotemporal area should be established with seborrheic dermatitis, nummular eczema, Bowen disease and, less frequently, with lichen-sclerosus et atrophicus and lichen simplex chronicus. The histological differential diagnosis should be made with other malignancies that occupy the epidermis and are characterized by cells with clear cytoplasm and patchy distribution, mainly superficial spreading melanoma and malignant lentigo, in which case the epithelial markers would be negative and the melanocytic markers (S-100, Melan-A, HMB-45, etc.) positive. P63 can be used to differentiate EMPD from the Pagetoid variant of Bowen disease.<sup>4-8</sup>

In general, EMPD is only locally aggressive. However, in cases of advanced or metastatic EMPD,<sup>7</sup> systemic chemotherapy is indicated.<sup>5,7,9</sup>

Surgery is the treatment of choice in EMPD.<sup>2,3</sup> However, recurrence rates are high even when the lesions are removed with wide surgical margins. Recurrence is probably due to the multifocal nature of the disease and subclinical involvement of skin that is apparently unaffected. Recurrence rates are higher in cases of invasive disease.<sup>5,7</sup> The use of Mohs micrographic surgery improves cure rates but does not prevent recurrence. Radiation therapy may be useful as adjuvant therapy in patients at high risk of recurrence.<sup>5</sup>

Because EMPD has a patchy distribution and the affected area often extends beyond the clinically visible tumor, photodynamic therapy may be a useful treatment when there is intraepithelial involvement and surgery is high-risk or when there is a high risk of morbidity due to the anatomical location of the lesion. However, because of the small number of studies and case reports of patients treated with this technique, photodynamic therapy should only be used when other approaches are not feasible.

We report the third case of EMPD affecting the face (the frontotemporal region). We call attention to the need to include this disease in the list of lesions that simulate other dermatoses and to the fact that its diagnosis requires immunohistochemical evaluation of the usual breast tumor markers. Ours is the first case treated with photodynamic therapy. The patient achieved complete temporary remission, so this treatment may be a good therapeutic option

when involvement is exclusively intraepidermal and when a surgical approach is difficult.

## References

1. Crocker HR. Paget's disease affecting the scrotum and penis. *Trans Pathol Soc Lond.* 1888;40:187-91.
2. Chilukuri S, Page R, Reed JA, Friedman J, Orenge I. Ectopic extramammary Paget's disease arising on the cheek. *Dermatol Surg.* 2002;28:430-3.
3. Cohen MA, Hanly A, Poulos E, Goldstein GD. Extramammary Paget's disease presenting on the face. *Dermatol Surg.* 2004;30:361-3.
4. Liegl B, Gogg-Kamere M, Tessaro B, Horn LC, Moifar F. Mammary and extramammary Paget's disease: an immunohistochemical study 83 cases. *Histopathology.* 2007;50:430-47.
5. Miyamoto A, Akasaka K, Oikawa H, Akasama T, Masuda T, Maesawa C. Immunohistochemical study of Her2 and TUBB3 proteins in extramammary Paget disease. *Am J Dermatopathol.* 2010;32:578-85.
6. Van Der Putte SCJ. Clear cells of Tokier in the developing anogenital region of male and female fetuses. *Am J Dermatopathol.* 2011;33:811-8.
7. Plaza JA, Torres-Cabal C, Ivan D, Prieto VG. Her2/neu expression in extramammary Paget disease: a clinicopathologic and immunohistochemical study of 47 cases with and without underlying malignancy. *J Cutan Pathol.* 2009;36:729-33.
8. Sawada Y, Bito T, Kasbashima R, Yoshiki R, Hino R, Nakamura M, et al. Ectopic extramammary Paget's disease: case report and literature review. *Acta Derm Venereol.* 2010;90:502-5.
9. Takahagi S, Noda H, Kamegashira A, Madakoro N, Hori I, Shindo H. Metastatic extramammary Paget's disease treated with paclitaxel and trastuzumab combination chemotherapy. *J Dermatol.* 2009;36:457-61.

A. Córdoba,<sup>a,\*</sup> M.E. Iglesias,<sup>b</sup> I. Rodríguez,<sup>a</sup> J.I. Yanguas<sup>b</sup>

<sup>a</sup> *Servicio de Anatomía Patológica, Complejo Hospitalario de Navarra, Pamplona, Navarra, Spain*

<sup>b</sup> *Servicio de Dermatología, Complejo Hospitalario de Navarra, Pamplona, Navarra, Spain*

\*Corresponding author.

E-mail address: [acordobi@cfnavarra.es](mailto:acordobi@cfnavarra.es) (A. Córdoba).

## Compression Treatment of Auricular Pseudocyst With Thermoplastic Splinting (Aquaplast®)<sup>☆</sup>

### Tablillas termoplásticas (Aquaplast®) como tratamiento compresivo en el pseudoquistes auricular

To the Editor:

Auricular pseudocyst, also known as benign idiopathic cystic chondromalacia, is a rare disorder that typically affects

young men without associated comorbidities. It very often recurs within a few days after drainage of the fluid.<sup>1,2</sup> We report a case of this disease in which compression treatment with thermoplastic splinting (Aquaplast) was performed in our department after drainage to prevent recurrence. This technique is simple and achieves a good cosmetic result.

A 27-year-old man without associated comorbidities, who regularly practiced boxing with headgear, presented with a soft, painless nodular lesion on the right ear that had appeared several months earlier (Fig. 1). The patient reported previous needle aspiration that had resulted in complete remission but the lesion had recurred after a few weeks. A diagnosis of auricular pseudocyst was made and partial drainage with biopsy was performed. Histology revealed an intracartilaginous space with eosinophilic degeneration of the cartilage and peri-

<sup>☆</sup> Please cite this article as: Kindem S, et al. Tablillas termoplásticas (Aquaplast®) como tratamiento compresivo en el pseudoquistes auricular. *Actas Dermosifiliogr.* 2013;104:357-9.



**Figure 1** Nodular lesion on the upper edge of the ear which is soft to palpation.

chondrial fibrosis, confirming the diagnosis of auricular pseudocyst.

It was decided to perform surgical treatment by draining the fluid content with a punch followed by compression on both sides of the ear with a thermoplastic splint (Aquaplast) using a button suture. The thermoplastic splint (Fig. 2A) must be heated to make it moldable. After heating for a few seconds it is put into place, molded to the shape of the ear on both sides (Figs. 2B and C), and then fixed with a button suture through the entire thickness of the ear (Fig. 2D). After a few minutes, the splint will have hardened in the shape of the ear and will apply constant pressure on both sides (Fig. 3).

The splint and sutures were removed 10 days after surgery without patient discomfort or signs of inflamma-



**Figure 3** Final result after placement of the splint on both sides of the ear.

tion. Today, after 1 year of follow-up, the patient has had no recurrence.

A review of the literature indicates that auricular pseudocyst recurs within 4 to 5 days in practically 100% of cases if only fluid drainage is performed.<sup>3</sup> Subsequent intralesional injection of corticosteroids lowers the recurrence rate to 50% but involves the risk of causing irreversible deformity to the ear.<sup>4,5</sup> Many authors have reported the use of subsequent compression using a variety of materials, ranging from pressure dressings to clothing button bolstering.<sup>6</sup> Thermoplastic splints provide good compression adjustment and patient comfort. They are made of gypsum and are widely used in nasal and facial plastic surgery. They have also been used in dermatologic surgery to provide stability and compression after skin graft placement.<sup>7</sup> Salgado et al.<sup>8</sup> described their use in the surgical treatment of auricular pseudocyst.



**Figure 2** A, Thermoplastic splint of 1.6 mm thickness before placing in hot water. B, Splint trimmed to size. C, The splint is placed on either side of the ear and manual compression is applied for a few seconds until it hardens. D, Button suture on both sides of the ear.

They are easy to use: after heating for a few seconds they become elastic and pliable, enabling them to be shaped and sutured. After a few minutes they cool and solidify, allowing a firm compression to be applied with a perfect fit to the area treated.

In conclusion, the use of thermoplastic splints for treating auricular pseudocyst is a simple procedure that employs a readily available material. It could reduce the frequent recurrence of this disease and avoid the use of more complex compression methods or more aggressive techniques.

## References

1. Ichioka S, Yamada A, Ueda K, Harii K. Pseudocyst of the auricle: case reports and its biochemical characteristics. *Ann Plast Surg.* 1993;31:471–4.
  2. Hoffmann TJ, Richardson TF, Jacobs RJ, Torres A. Pseudocyst of the auricle. *J Dermatol Surg Oncol.* 1993;19:259–62.
  3. Glamb R, Kim R. Pseudocyst of the auricle. *J Am Acad Dermatol.* 1984;11:58–63.
  4. Harder MK, Zachary CB. Pseudocyst of the ear. Surgical treatment. *J Dermatol Surg Oncol.* 1993;19:585–8.
  5. Miyamoto H, Oida M, Onuma S, Uchiyama M. Steroid injection therapy for pseudocyst of the auricle. *Acta Derm Venereol.* 1994;74:140–2.
  6. Göktay F, Aslan C. Successful treatment of auricular pseudocyst with clothing button bolsters alone. *J Dermatolog Treat.* 2011;22:285–7.
  7. Meads SB, Greenway HT, Eaton JS. Surgical pearl: thermoplastic bolster dressing for full-thickness skin grafts. *J Am Acad Dermatol.* 2006;54:152–3.
  8. Salgado CJ, Hardy JE, Mardini S, Dockery JM, Matthews MS. Treatment of auricular pseudocyst with aspiration and local pressure. *J Plast Reconstr Aesthet Surg.* 2006;59:1450–2.
- S. Kindem,\* O. Sanmartin, C. Serra-Guillén, C. Guillén  
*Servicio de Dermatología, Instituto Valenciano de Oncología, Valencia, Spain*
- \*Corresponding author.  
*E-mail address: [sabrinakindem@hotmail.com](mailto:sabrinakindem@hotmail.com) (S. Kindem).*