ELECTRONIC CLINICAL CASE

Combined nevus of the tarsal conjunctival

Nævus combiné de la conjonctive tarsale

V. Huerva a,*, M.C. Sánchez a, J. Soldevila a, F.J. Ascaso b

a Department of Ophthalmology, University Hospital Arnau de Vilanova, Avda, Rovira Roure 80, 25198 Lleida, Spain
b Department of Ophthalmology, "Lozano Blesa" University Clinic Hospital, San Juan Bosco 15, 50009 Zaragoza, Spain

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Summary We present an unusual case of combined nevus of the tarsal conjunctiva and eyelid margin in a pregnant woman who noticed morphological changes of the lesion during pregnancy. The patient underwent a wide full-thickness eyelid excisional biopsy including tarsal conjunctiva. Histopathologically, a subepithelial combined nevus (nevocellular and blue nevus) was observed. Conjunctival nevi are benign lesions with wide variation in clinical and histopathological features. Tarsal conjunctival involvement, as in the present case, is extremely rare (less than 1% of conjunctival nevi), especially the blue type nevus. Definitive diagnosis is possible only with excisional biopsy.

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MOTS CLÉS
Nævus bleu; Nævus combiné; Nævous conjonctivaux

Résumé On présente un cas peu fréquent de nævus combiné de la conjonctive tarsale et du contour de la paupière chez une femme enceinte qui présentait des modifications morphologiques de la lésion pendant sa grossesse. La patiente a subi une biopsie-exérèse des paupières larges de pleine épaisseur ayant une conjonctive tarsale. L'examen histopathologique a montré un nævus combiné dans la partie basale (nævus de type nÆvocellulaire et bleu). Les nævi conjonctivaux sont des lésions bénignes qui subissent plusieurs modifications dans leurs caractéristiques cliniques et histopathologiques. La présence d'une conjonctive tarsale, spécialement le nævus de type bleu, comme le cas présent, est extrêmement rare (moins de 1% des nævi conjonctivaux). Le diagnostic définitif n'est possible qu'apres la biopsie-exérèse.

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* Corresponding author.
E-mail address: vhruerva@gmail.com (V. Huerva).

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**Introduction**

Conjunctival nevi are benign lesions with wide variation in clinical and histopathological features. They become clinically apparent in the first several decades of life and are almost exclusively localized to the bulbar and caruncular conjunctiva [1]. Nevi of the tarsal conjunctiva are rare (less than 1% of conjunctival nevi), especially the blue type. To our knowledge, only six cases of tarsal conjunctival blue nevi exist in the English literature [1–3]. We report a new case in a female with a combined nevus (nevocellular and blue type) of tarsal conjunctiva and eyelid margin.

**Case report**

A 26-year-old woman complained of a minimally elevated and slightly pigmented lesion on the palpebral aspect of her right lower eyelid. The patient declared that she had the lesion for six years, however, she noticed changes only during her recent pregnancy. She denied pain, redness, itching, or visual changes. The patient’s family members had no history of melanoma. On examination, her best-corrected visual acuity was 20/20 in both eyes and she had a normal eye exam. The left eyelids had no pigmented lesions. On the right lower eyelid, approximately 1 cm from the lateral canthus, there was a 1-mm minimally elevated, blue to slate gray in color, lesion of the eyelid margin (Fig. 1) that extended to the tarsal conjunctiva showing an hyperpigmented aspect. Likewise, an increased conjunctival vascularity was observed (Fig. 2). No pigmented lesions were appreciated on the bulbar conjunctiva or during the fundus examination of both eyes. Because of the changes reported by the patient and despite the benign aspect of the lesion we decided to perform a biopsy. A wide full-thickness eyelid excisional biopsy involving tarsal conjunctiva was performed. Histopathologically, a subepithelial combined nevus (nevocellular and blue type nevus) was observed (Fig. 3). Subepithelial infiltrate of melanocytes and some lymphocytes were present. Thus, a deeply situated blue nevus of the tarsus coexisted with another component of superficial subepithelial nevocytic nests. No cytologic pleomorphism, atypical mitosis, or necrosis was found. The surgical margins were free of lesional tissue. Immunostaining with KI-67 revealed uniformly low proliferative activity (1% labelling index) in both superficial nevomelanocytic and deep blue nevus component. Clinical follow-up showed no evidence of recurrence at 6 months after the resection of the lesion (Fig. 4).

**Discussion**

Nevi are the most common conjunctival melanocytic lesions. Bulbar conjunctiva and caruncle are the most frequent locations for conjunctival nevi. This localization could be related to sunlight exposure [4]. Tarsal conjunctival involvement, as seen in the present case, is rare (less than 1% of conjunctival nevi), especially for the blue type [1,2,5]. To date, only 16 cases of tarsal conjunctival nevi have been
reported in the English literature and only six of them were blue nevi. Blue nevi have been well documented to occur throughout the conjunctival sac [1,6,7]. However, the occurrence of a blue nevus located entirely within the tarsus is extremely rare and, to the author’s knowledge, only six cases have been previously described. Thus, Shields et al., in a series of 410 conjunctival nevi, reported the first one [1]. Jakobiec et al. described recently another blue nevus of the tarsus as the predominant component of a combined nevus (nevocellular and blue type) of the eyelid [2]. The remaining four cases, reported by Kim et al., were also combined nevi [3]. Nevi can be classified histopathologically as subepithelial (15—32%), junctional (3—6%), and compound (64—78%) [1,5,8,9]. Subepithelial nevi present nevus cells confined to the conjunctival stroma. In the present case, the epithelium of the tarsal conjunctiva showed no intraepithelial melanocytic proliferation and a subepithelial nevocytic nevus coexisted with a deeply situated blue nevus of the tarsus. Therefore, a diagnosis of combined nevus (conventional nevocytic and blue nevus components in the same lesion) was made. This entity is found among eyelid margin lesions, generally without inflammation [2]. The presence of an inflammatory infiltrate is typical for lesions that have changed recently and is thought to be due to the fact that patients tend to scratch or frequently touch these new lesions. The inflammation in the current lesion may simply be reflective of the normal lymphoid population of the palpebral substantia propria near the eyelid margin. Blue nevi are rare benign pigmented lesions whose origin at extracutaneous sites like conjunctiva has been subject to controversy. Thus, this infrequent clinicopathologic variant might derive from melanocytic precursors that migrated from the neural crest towards the substantia propria of the conjunctiva during embryogenesis or result from the transformation of the stromal Schwann cells into melanocytes [10,11]. In the literature, changes in benign melanocytic lesions of the skin and conjunctiva around puberty or during pregnancy are well-documented. The reason is the presence of estrogen receptors on the surface of melanocytic cells. The finding in this patient may be not unexpected. The growth of a cutaneous nevus actually occurs during pregnancy but found persisting controversy and even some disproof regarding this issue [12]. Hyperpigmentation should not be confused with growth of the lesion, so pregnancy can result in a nonproliferative activation of melanocytes, as has been proposed [13]. Metabolic nonproliferative hyperpigmentation can be seen during pregnancy with chloasma and hyperpigmentation of the areola, linea alba, axilla, and genitalia. It is possible that our patient experienced only coloration changes. We have no prior clinical evaluation reports or photographs to ensure that the lesion has indeed grown.

Although blue nevi have only a very slight potential for malignant transformation, previous reports suggest that the presence of a conjunctival nevus in the tarsal and fornical region should raise the suspicion of malignancy hence early biopsy is warranted [1,8,9,14]. Benign blue nevus cells can reveal slow growth and have low Ki-67 indices of nuclear positivity (< 5%) compatible with benignity [7,15]. Alterations in the clinical intensity of pigmentation can also be ascribed to increasingly prominent accumulations of melanophages, which were quite numerous in the present lesion. During pregnancy, cutaneous nevi may reveal reversible changes including lightening or darkening, and increase in size or vascularization [6,16—21]. There is no evidence in the literature of a pre-existent nevus converting into a malignant melanoma during pregnancy, nor for that matter, actually causing a de novo melanoma. This makes it somewhat moot whether pigmentary changes within any lesion during pregnancy have any clinical significance.

In conclusion, a new case or a rare conjunctival tarsal blue nevus is presented. Because the majority of pigmented lesions of the tarsal conjunctiva are either malignant melanomas or their precursors, a biopsy may be necessary to establish the diagnosis and determine the appropriate management.

**Disclosure of interest**

The authors declare that they have no conflict of interest concerning this article.

**References**


