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Plaque-type Blue Nevus

Review and an Unusual Case

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A 31-year-old male presented with a 13–15-mm blue-black plaque tumor on his left forearm, which had existed since birth. Histological examination showed a common blue nevus. Its small size and its location are unusual. A review of plaque-type blue nevus is given. ***Key words: forearm; common blue nevus; simple excision.***

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Plaque-type blue nevus is a rare variant of blue nevus, with only a few cases having been reported since the first case was described by Tièche in 1906 (1). It is located mainly on the trunk, and it is usually large. An unusually small plaque-type blue nevus on the left forearm is presented here.

CASE REPORT

A 31-year-old man presented with an asymptomatic blue-black lesion over his left forearm, which had existed since birth. The lesion gradually enlarged with the patient's growth but remained unchanged in size, color, and texture after adolescence. On examination, there was a 13 × 15 mm irregularly demarcated blue-black plaque composed of many macules, papules, and nodules of varying size on the dorsal aspect of the left forearm (Fig. 1). The consistence was rubbery hard. The remainder of the physical examination was normal.

The plaque was excised and histopathological examination revealed numerous heavily melanin-laden spindle-shaped, bipolar dendritic melanocytes, extending from the upper dermis into the subcutaneous tissue. The melanocytes lay grouped together in irregular bundles, with a tendency to gather around the hair follicles and blood vessels. Their long axes were predominantly parallel to the epidermis. Many melanophages were intermingled with the melanocytes. The epidermis appeared normal. No islands of pale cells were observed. These findings were diagnostically typical of a common blue nevus.

Fig. 1. Irregularly demarcated blue-black plaque, 13 × 15 mm in size, composed of many macules, papules, and nodules of varying size on the dorsal aspect of the left forearm.

DISCUSSION

Dermal melanocytosis includes Mongolian spots, the nevus of Ota and Ito, and blue nevus. Blue nevi are rarer than the other two. Generally, they occur on the skin, but they have been reported in other locations, such as the mucosa (2), conjunctiva (3), vagina (4) and lymph nodes (5).

On the skin, three types of blue nevi are recognized: common blue nevus, cellular blue nevus and combined nevus. Common blue nevus is usually an asymptomatic, blue or black, dome-shaped papule, measuring less than 1 cm in diameter. Half of the common blue nevi occur on or near the dorsa of the hands and the feet (6). Cellular blue nevus is usually larger, measuring several centimeters in diameter. The sacrococcygeal region and buttocks are the usual locations. Combined blue nevus manifests as a blue nevus combined with a cellular nevus. The plaque-type is a rare variant of the blue nevus. Only 11 cases have been reported previously in the English literature. Most of them have location on the trunk (6, 8–11). The sizes were exclusively very large. This case, measuring only 13 × 15 mm, is very unusual. Plaque-type blue nevus is composed of multiple blue papules with an intervening bluish discoloration (7). It is also known as extensive blue nevus of Jadassohn–Tièche (6), or eruptive blue nevus (8). However, plaque-type blue nevus might also be described as a plaque composed of an aggregation of many blue macules and/or papules. Ishibashi et al. (9) reported 3 cases of plaque-type blue nevus combined with lentigo. The second case presented with only speckled blue and brownish macules, without any palpable components. Shenfield & Maize (10) reported a case of multiple and agminated blue nevi, but Tsoïtis et al. (11) regarded it as a plaque-type blue nevus. The plaque reported by Shenfield & Maize was composed of about 50 blue to black papules over the epigastric region, which was without any intervening bluish discoloration. Tsoïtis et al. (11) described a case of superficial and neuroid multinodular plaque-type blue nevus, presenting with a triangular plaque composed of multiple slate-blue nodules on the presternal region of a 63-year-old woman, also without intervening blue discoloration. Plaque-type blue nevus may be present at birth (9, 12, 13) or appear in infancy (6, 9), adolescence (8) or adulthood (10, 11). Most of the plaque-type blue nevi show the histological features of common blue nevus (6, 8–10, 12, 13), characterized by dendritic pigmented melanocytes in clumps over the mid- to reticular dermis. However, cellular blue nevi have also been reported (9, 11, 14) which reveal a biphasic pattern with dendritic melanocytes and large pale spindle-shaped cells. The multinodular plaque-type blue nevus reported by Tsoïtis et al. (11) showed a

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partially cellular blue nevus with a superficial topography and a neuroid arrangement. Ishibashi et al. (9) reported 3 cases combined with lentigo-like epidermal changes. Because of the characteristic clinical appearance and histopathological findings, plaque-type blue nevus is easily diagnosed. Plaque-type blue nevus on the face or shoulder may be difficult to distinguish from the nevus of Ota or Ito. In the nevus of Ota, there is a typical ophthalmomaxillary location, frequently accompanied by a patchy blue discoloration of the sclera. Brown or slate-blue macules and patches are usually present in the nevus of Ota and Ito, rather than blue to blue-black macules and papules in a circumscribed area. The histopathology shows that the dermal melanocytes are generally more superficially located and less concentrated than in blue nevi. No malignant changes have been reported in plaque-type blue nevi. Most cases exhibit clinically benign behavior over a long period of time (6, 9–13). Moreover, the histopathology of most cases has revealed common blue nevi, which showed no propensity to malignancy. However, because of the rarity of plaque-type blue nevus, no definite prognosis can be immediately made. Surgical removal with full-thickness skin graft of such nevi for prophylactic reasons is not medically necessary, except for cosmetic reasons, since the lesion has a benign course. In this case, simple excision was readily performed because of the small size of the lesion.

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