Plaque-type blue naevus

The plaque-type blue naevus is an exceptionally rare variant of blue naevi. The correct diagnosis is challenging both clinically as well as histologically, but recognition and awareness is important to avoid a diagnosis as malignancy. Plaque-type naevi are large measuring up to 24 cm. They present as irregularly shaped plaques with greyish-blue pigmentation and frequently contain multiple papules and nodules. There is a predilection for the trunk and scalp and a wide age range is affected with frequent congenital or childhood onset. Change and growth may be observed during and after puberty.

Histologically, plaque-type blue naevi are composed of ovoid to spindle shaped melanocytes admixed with pigmented dendritic cells in varying numbers. The cellularity is variable and the lesion shows features ranging from common blue naevus and dermal melanocytoses to those of cellular blue naevus. The tumours are dermal based with significant extension into deeper tissues, including fascia. Lesional growth is however non-destructive. Cytological atypia or nuclear pleomorphism, tumour necrosis, perineurial or lymphovascular invasion are not present and mitotic activity is rare.

By immunohistochemistry, melanocytes variably express S100, but HMB-45 and Melan A expression is often retained throughout the lesion.

Treatment may be difficult due to the large lesional size and deep invasion. Malignant transformation is rare.

The main differential diagnosis is with desmoplastic melanoma in view of the clinical presentation as large plaques with frequent involvement of the scalp and the histological features of a deeply infiltrative spindle cell tumour. Helpful distinguishing features include the young age at presentation, lack of a desmoplastic stromal response and the biphasic
architecture containing pigmented dendritic cells and lack of any cytological atypia.

Furthermore, desmoplastic melanoma typically expresses S100 but not HMB-45 or Melan A by immunohistochemistry.

References


