

4. Dysplastic nevus

A dysplastic nevus (DN), also known as an atypical nevus, can be described using the ABCDE acronym: Asymmetrical lesion; Border, irregular and indistinct; Colour variegation, including white, tan, dark brown, or black; Diameter larger than 6 mm; and Evolution or change of the lesion.¹

At a National Institute of Health consensus conference in 1992, the histologic criteria of DN were defined as follows: architectural disorder with asymmetry, subepidermal fibroplasia, lentiginous melanocytic hyperplasia with spindle or epithelioid melanocytes aggregating in nests of variable size, bridging of rete ridges, variable dermal lymphocytic infiltration, and extension of intraepidermal melanocytes beyond the main dermal component of the nevus.² However, the histologic diagnostic criteria remain disputed.³ Dysplastic nevi might develop sporadically or can be inherited in clusters, and are associated with an increased risk of developing melanoma.⁴ Sun exposure is thought to play a role in the lesions' development. Nevertheless, a DN can appear anywhere on the body, particularly on intermittently sun-exposed areas, such as the back.⁵

Differential diagnosis

Melanoma is a malignant tumour of melanocytes, which can develop from a previous lesion, such as a DN, or can arise de novo.⁶ It can be difficult to clinically distinguish between an early melanoma and a DN, as both might have similar ABCDE features.⁷ Types of melanoma that typically look similar to a DN are superficial spreading melanoma, melanoma in situ, and lentigo melanoma.⁸ Metastases do not typically develop from melanomas that are thin.^{4,9} It is, therefore, essential to biopsy any suspicious lesions in order to detect melanoma early.

Acquired melanocytic nevi are benign tumours of melanocytes that all humans possess. Lesions are usually less than 6 mm in diameter, homogenous in colour, and have well-demarcated borders.⁴ They begin developing in early childhood, stabilize in numbers by the third and fourth decades, then slowly regress with age. Conversely, a DN generally appears during puberty, is constantly changing in appearance, and develops throughout adulthood.¹⁰

Seborrheic keratosis is a cutaneous neoplasm of benign origin. It presents as a verrucous, round papule or plaque, light brown to black in colour. It often has a "stuck on" appearance and commonly occurs on the neck, face, and trunk. Lesions have sharply demarcated borders and, histologically, are composed of proliferating keratinocytes with no melanocytic origin.⁴

Senile lentigo (liver spots) is a benign, acquired lesion commonly found in older adults. The lesion presents as a uniform, tan to brown macule and typically appears on sun-exposed skin, such as the face and dorsa of the hands.⁴

Management

When encountering a patient with a possible DN, the first step is to take a detailed personal history of past skin cancers, removal of other suspicious nevi, blistering sunburns, and ultraviolet exposure. Knowledge of a family history of melanoma or DN is very important, particularly with respect to first-degree relatives.¹¹ A patient who has many DN, or a DN and a personal or family history of melanoma, is at increased risk of developing melanoma and should be periodically screened.^{10,12}

A complete examination of the entire skin surface should follow the history. A baseline skin assessment of DN and all other nevi should be established and documented. Because the likelihood of a single clinically diagnosed DN developing into melanoma is very low, an excision is not necessarily warranted if melanoma can be ruled out.¹¹ Diagnostic tools such as dermoscopy or digital imaging devices are useful aids, but are most commonly employed by dermatologists.^{3,11}

Patients should be educated about the ABCDEs of melanoma and taught how to perform periodic mole checks. Dysplastic nevi should be photographed alongside a ruler and compared every 3 to 4 months in case of possible changes. In addition, sun avoidance during peak hours (ie, 11:00 AM to 4:00 PM); the use of protective attire, including sunglasses and sun-shielding apparel; and sunscreen application every 2 to 3 hours when outdoors should be emphasized as part of thorough patient education.^{11,12} Follow-up should be carried out every 6 to 12 months or if the patient notices any changes of concern.¹¹

If melanoma cannot be ruled out, the lesion should be excised. The DN should be removed with a 2-mm surgical margin. Excision depth should extend to the subcutaneous tissue to prevent lesion recurrence and allow for pathological examination of the tissue for malignancy.³

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Competing interests

None declared

References

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