ABCDEF Rule Guides Melanychia Diagnosis

BY DOUG BRUNK

SAN DIEGO — Of the many cases of longitudinal melanonychia—a longitudinal brown-black discoloration of the nail plate—only a fraction are subungual melanomas.

"With some of these you know they're going to require an extensive work-up or biopsy," Dr. Arash Izadpanah said at a melanoma update sponsored by the Scripps Clinic. "Others are not so concerning, but it's not always intuitive whether these are benign or malignant."

In 2000, researchers led by Dr. Eyal K. Levit created a modified ABCDEF rule for the clinical detection of subungual melanomas (J. Am. Acad. Dermatol. 2000;42:269-74).

In this mnemonic, **A** stands for age, with the peak incidence occurring in the fifth to seventh decade of life.

B stands for black-brown band with a width greater than 3 mm. "The size of the band is crucial," said Dr. Izadpanah of the division of dermatology at Scripps in San Diego.

'Longitudinal melanonychia is the first manifestation in 38%-76% of nail apparatus melanoma.'

DR. IZADPANAH

C stands for change in morphology such as color and width. Subungual melanomas may have blurred indistinct margins or a variation in band color.

D stands for involvement of digits, particularly the thumb, the great toe, and the index finger. "If there's dystrophy of the nail, unfortunately that's a late finding," he said.

E stands for extension of pigment to the periungual folds, and **F** stands for family history of melanoma.

"The most important thing is using your clinical judgment," he said.

Longitudinal melanonychia stems from either melanocytic activation or melanocytic hyperplasia. In melanocytic activation—the most common cause of longitudinal melanonychia in adults—"the melanocytes are there and something happens to get them producing melanosomes and pigment, but there is no actual increase in the number of melanocytes," Dr. Izadpanah explained.

Melanocytic hyperplasia—the most common cause of longitudinal melanonychia in children—is marked by an increase in the number of matrix melanocytes. "This could be for benign or malignant reasons," he said.

Certain racial groups are susceptible to melanocytic activation, including African Americans, Chinese, Japanese, and Native Americans. Other physiologic causes include pregnancy and trauma to the nail, Dr. Izadpanah said.

Dermatologic causes of melanocytic activation include psoriasis, lichen planus, amyloidosis, systemic lupus erythematosus, onychomycosis, and nonmelanocytic tumors.

Systemic causes of melanocytic activation include endocrine disorders such as Addison's disease and Cushing's syndrome, hyperthyroidism, and acromegaly. Other possible culprits include vitamin B_{12} deficiency, malnutrition, alcaptonuria, porphyria, graft-versus-host disease, AIDS, Laugier-Hunziker syndrome, and Peutz-Jeghers syndrome.

Iatrogenic causes of melanocytic activation include radiation and a host of commonly used medications, including antimalarials, minocycline, sulfonamides,

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