MELANOMA, ACRAL LENTIGINOUS

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Acral lentiginous melanoma (ALM) is a rare type of cutaneous malignant melanoma. It appears on the hands and feet, primarily located on the palms, soles, and under nail surfaces. The appearance of ALM has a range of colors and shapes. It often presents as a flat, brown, gray to black lesion with irregular borders. There is also an amelanotic variant of ALM that does not have dark pigmentation. Amelanotic ALM presents as a reddish, pinkish macule, papule, plaque, or nodule. ALMs regardless of pigment, most frequently occur on the lower extremities, particularly on the big toe. Delayed diagnosis can result in ulcerated and eroded lesions that are inflamed and itchy.

The mean age at presentation is 50-60 years for both male and females. ALMs occur at equal rates among all races and skin types. However, ALM is the predominant type of melanoma in dark-skinned individuals, including those of African, Asian, and Hispanic descent. At this time, there is no definitive cause for ALM, and this is salient because ALM does not typically present on sun-exposed areas like most melanomas. The most agreed upon explanation we have is that the areas where ALMs occur are regularly exposed to pressure, friction, maceration, and irritation, and the trauma is a risk factor for development of malignant tissue growth.

Clinical presentation of acral melanoma varies greatly, which makes it very difficult to assess and diagnose. ALMs may be missed because the bottom of the feet is not an area often inspected, and once a lesion is identified, there may be a hesitancy to perform a biopsy on this area or beneath a nail that may impair daily activities. Delayed diagnosis results in ALM first presenting at an advanced stage, which translates into poor prognosis and relatively low survival rates. In addition to presenting at late stages, ALMs tend to be aggressive cancers and will metastasize if not treated. Likely contributing to this behavior are tumor-promoting mutations in several genes that have been identified in tissue profiling of subsets of acral melanoma. The most common mutations including KIT, BRAF, NRAS, NF1, and GNAQ.

Initial diagnostic examination is clinical. This is best performed with dermoscopy, which uses a high powered magnifying glass. If a lesion is suspicious for melanoma, a biopsy is indicated to confirm the diagnosis of ALM. Histologically, ALM is characterized by confluent single-cell melanocytic proliferation along the dermo-epidermal junction with pagetoid spread. Surgical excision is the primary treatment for ALM and surgical margins will depend on tumor invasion. In addition, a patient may also require treatment with immunotherapy with checkpoint inhibitors, including CTLA-4 and PD-1 inhibitors, T-VEC, or targeted therapy like BRAF and MEK inhibitors. Treatment options are evolving and are undergoing clinical trials.