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Small Cell Melanoma

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Dear Editor:

Small cells can be observed in various neoplasms such as small-cell neuroendocrine carcinoma, lymphoma, neuroblastoma, Ewing's sarcoma, and malignant melanoma. Small-cell melanoma, however, is a very rare type of malignant melanoma[1]. We report a case of malignant melanoma composed mostly of small cells. To our knowledge, this is the first report of such a case in Korea. A 70-year-old female patient was referred to our clinic from a private clinic for an accurate diagnosis of a skin lesion on the right sole. She first recognized the lesion 1 year ago, which seemed to have been increasing in size without any other symptoms. A skin biopsy from the sole was obtained at a private clinic. At the time of her visit, a solitary black patch on sutured skin was noted on her right sole, and irregular brownish to bluish small patches were observed beside the excised area (Fig. 1). The histopathology slide showed a dense aggregation of small cells in the dermis. The cells were small, hyperchromatic, and had scant cytoplasm. On immunohistochemistry, the tumor cells were reactive to HMB-45, and also reactive to S-100 protein and Melan-A. After the lesion was diagnosed as malignant melanoma, the patient was referred to the department of plastic surgery for operation and staging. She was scheduled to undergo surgery 2 months later. During the waiting period, her lesion showed an abruptly enlarged ulcerative mass protruding from the patches. The completely excised mass lesion showed aggregation of dense small cells with vascular invasion into the dermis without lentiginous melanocytic proliferation, whereas the brownish to bluish small patches exhibited lentiginous proliferation of atypical melanocytes (Fig. 2). On computed tomography, metastasis to the liver and bone were noted; her melanoma was diagnosed as stage IV. She was moved to the hematology-oncology department and has since been receiving chemotherapy. The small cell type is a very uncommon subtype, occurring in about 2% of all malignant melanomas[2], and manifests as protuberant or ulcerating nodules with aggressive behavior[3]. Its prognosis, however, is not well documented because of its rarity. Histopathologically, small cell melanoma requires differential diagnosis with other small cell neoplasms, including neuroendocrine carcinoma, lymphoblastic lymphoma, neuroblastoma, and Ewing's sarcoma. In our case, the clinical manifestation of black patch on the sole suggested melanoma. Furthermore, lentiginous epidermal involvement of melanocytes, which was observed as a black patch beside the nodule containing the small cells in our case, is not observed in the other

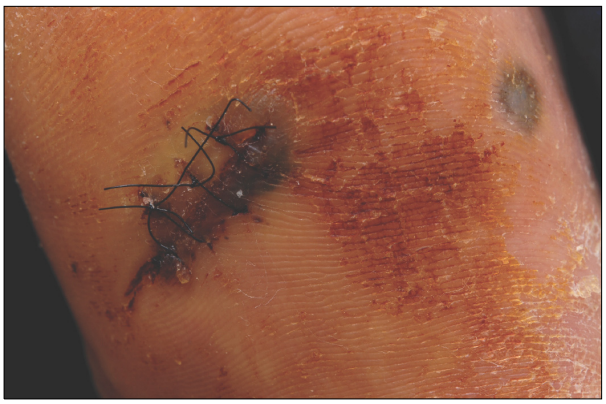

Fig. 1. A solitary black patch on sutured skin and irregular brownish to bluish small patches beside the excised area were observed on the patient's right sole.

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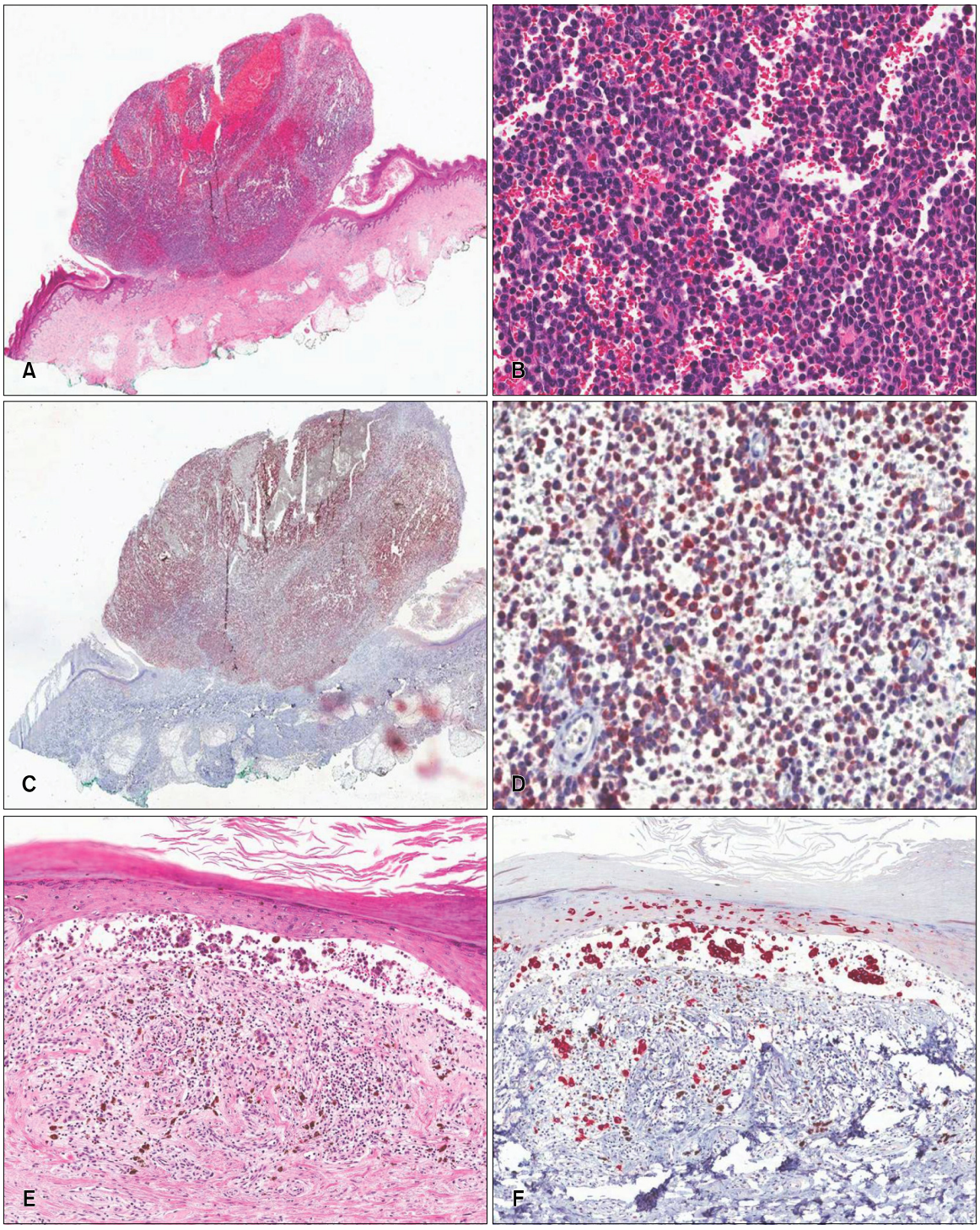

Fig. 2. The excised nodular lesion was composed of small cells. The round small cells were immunoreactive to Melan-A (A～D). Beside the nodular lesion, a black patch with lentiginous proliferation of melanocytes and showing reactivity to Melan-A was observed (E, F). (A) H&E, ×4; (B) H&E, ×200; (C) immunohistochemical stain, ×4; (D) immunohistochemical stain, ×200; (E) H&E, ×100; (F) immunohistochemical stain, ×100.

tumor types described above. Although neuroblastoma sometimes stains positive for S-100 protein, positive staining for HMB-45 and Melan-A as well as S-100 protein confirmed the diagnosis of melanoma in our case[4]. Herein, we report a very rare type of malignant melanoma, small cell melanoma. This case is important because it shows that when aggregation of small cells is observed on histopathology, malignant melanoma should

be considered in the differential diagnosis so that patients can receive immediate treatment.

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Gene-Gene Interaction between *LCE* and *CLEC16A* Increases the Risk of Psoriasis in a Chinese Population

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Dear Editor:

Psoriasis is a common cutaneous disease characterized by inflammation and abnormal epidermal proliferation. Currently, some inflammatory cells, such as dendritic cells, macrophages, neutrophils, and keratinocytes, and several cytokines are believed to play important roles in the pathogenesis of psoriasis[1]. Our previous genome-wide association study (GWAS) provided convincing evidence for the *LCE* gene cluster being a susceptibility factor for psoriasis and showed that *CLEC16A* was significantly associated with development of psoriasis (SNP rs193756, odds ratio [OR] = 0.8, $p = 0.0004$)[2], although $P_{rs193756}$ was found to be $>10^{-8}$. Moreover, *CLEC16A* has previously been found to be linked to multiple sclerosis, and patients with this gene were at a higher risk of developing psoriasis[3]. The *LCE* gene cluster encodes epidermal barrier proteins, and perturbation of expression of these genes is associated with psoriasis[4]. Bergboer et al.[5] found that the expression of *LCE* proteins was regulated by a combination of pro-inflammatory cytokines. In fact, *CLEC16A* is shown to be highly expressed in inflammatory cells such as dendritic cells, macrophages, B-lymphocytes, and natural killer cells[6]. In addition, the interaction between *LCE* and *HLA-C* and among the *MHC* locus, *LCE*, and *IL12B* have also been studied in large samples of diverse ethnic populations[7,8]. Therefore, the postulated common pathway of *LCE* and *CLEC16A* between inflammatory response and epidermal barrier prompted us to examine the combined contribu-

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