An unusual case of desmoplastic fibroblastoma with an ulceration on a toe

Department of Dermatology and Cutaneous Biology Research Institute, Brain Korea 21 Project for Medical Science, ¹Department of Pathology, Yonsei University College of Medicine, ²Department of Radiology, ³Department of Dermatology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine

Jin Mo Park, Sarha Lee¹, Seongmin Noh, Hyunjoong Jee, Young Han Lee², Hyoe Jin Roh, Hee Jung Kim³, Jin Ok Baek, Min-Geol Lee

Desmoplastic fibroblastoma (DF) is a rare tumor described by Evans in 1995. It is a painless solitary mass and grows slowly for more than 6 months up to 20cm. Some studies reported an abnormal clone involving the 11q12 breakpoint. DF mainly affects male with wide distribution. Tumor cells are composed of fibroblasts and myofibroblasts in a collagenous background. Also it presents characteristic reactions to immunostain. A 78-year-old man presented a non-tender, painless, solitary mass on his right first toe for 4 months. It sized a 4x4 cm and there was a 1x1 cm ulceration on the web side. At first, biopsy was done under the impression of fibroma with a diabetic ulcer. Magnetic resonance imaging (MRI) with contrast showed well defined mass at the dark signal intensity on T2-weighted images. Surgical excision was done for the treatment. The specimen was white-tan-colored fibrotic mass with homogenous cut surface. Microscopically, the tumor was hypocellular and composed of spindle to stellate-shaped cells in a collagenous stroma. Cells were positive for vimentin and focally positive for α-SMA but negative for CK, EMA, S-100 protein, and CD34. There was no recurrence and metastasis over 8 months after surgical excision. As DF is rarely reported in dermatologic field and resembles other tumors or cysts, it is hard to make a diagnosis. Thus, both radiology studies and immunohistochemistry studies are essentially required for diagnosis.