A case of atypical intradermal smooth muscle neoplasm that resembled keloid

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Since keloids often recur when they are surgically excised, histological samples are rarely obtained. Consequently, these lesions are often diagnosed on the basis of clinical findings alone. This situation means that the clinician must carefully exclude differential diseases that are similar to keloids. We report and discuss here a case of atypical intradermal smooth muscle neoplasm (AISMN) that was erroneously diagnosed as a keloid. A 72-year-old female visited our hospital with a red, hard skin lesion on her left thigh. The original lesion had been diagnosed as an epidermal cyst and was surgically excised. However, the lesion relapsed and grew beyond the boundaries of the original lesion. The lesion was then diagnosed as a keloid, and the patient was referred to our hospital. We applied steroid tape and injection, but the subcutaneous mass continued to grow. We then obtained an excisional biopsy: the pathological diagnosis was AISMN. The lesion was effectively treated with expanded resection and a split-thickness skin graft. In conclusion, AISMNs were originally considered to be cutaneous leiomyosarcomas. However, they only exhibit intradermal or minimal subcutaneous involvement, and unlike true cutaneous leiomyosarcomas, they do not associate with a risk of metastasis or tumor-related deaths. Therefore, the term AISMN was proposed in 2011. Surgical margin status is the most important predictor of recurrence. Our case demonstrates the importance of discriminating AISMN from keloids. If a diagnosed keloid exhibits atypical signs and symptoms or does not respond to steroid treatment, we should not hesitate to perform a biopsy.