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동일 병변 내에서 관찰된  
피부섬유육종과 광선각화증: 희귀  
사례 보고

(Collision Tumor of Dermatofibrosarcoma  
Protuberans and Actinic Keratosis: A Rare  
Coexistence)



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**Purpose:** Dermatofibrosarcoma protuberans (DFSP) is a rare, locally aggressive cutaneous sarcoma, whereas actinic keratosis (AK) is a common premalignant epidermal lesion. The simultaneous occurrence of these two distinct pathologies within a single lesion—known as a collision tumor—is extremely rare and poses significant diagnostic challenges. We report a case of a collision lesion comprising DFSP and AK to highlight the importance of accurate clinicopathological correlation and deep tissue sampling.

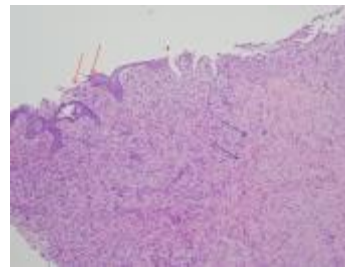
**Methods:** An 80-year-old man presented with a solitary, 0.6 × 0.8 cm erythematous ulcerative lesion on the right temple. Initial punch biopsy suggested only AK. Due to persistent ulceration, a repeat deep biopsy was performed. Immunohistochemical staining with CD34 and smooth muscle actin (SMA) was utilized to characterize the dermal component.

**Results:** The initial superficial biopsy indicated only actinic keratosis. However, the subsequent deep biopsy revealed a complex histology: the epidermis showed atypical keratinocytes consistent with AK, while the underlying dermis contained a storiform proliferation of spindle cells. Immunohistochemistry demonstrated diffuse CD34 positivity and SMA negativity, confirming the diagnosis of DFSP and excluding smooth muscle tumors. The patient underwent Mohs micrographic surgery to ensure clear margins, followed by bilobed flap reconstruction. At the 2-month follow-up, complete healing was observed without recurrence.

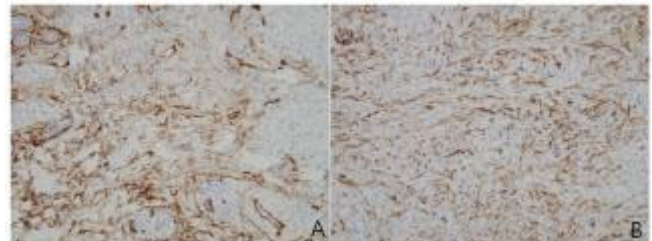
**Conclusion:** Clinicians should suspect collision tumors when AK presents with atypical features like ulceration or induration. Deep biopsy is essential to reveal underlying neoplasms such as DFSP. Mohs micrographic surgery offers precise margin control and optimal outcomes for these complex lesions.



**Fig. 1.** Preoperative photograph of an 80-year-old man with a solitary erythematous ulcerative lesion measuring 0.6×0.8 cm on the right temple.



**Fig. 2.** Photomicrograph of the specimen stained with hematoxylin and eosin (×100). Atypical keratinocytes confined to the epidermis consistent with actinic keratosis (red arrows), along with storiform spindle cell proliferation in the dermis characteristic of dermatofibrosarcoma protuberans (blue arrows).



**Fig. 3.** Photomicrographs of the specimen immunohistochemically stained for CD34 (A, ×200) and smooth muscle actin (SMA) (B, ×200). Diffuse and strong positivity for CD34 is observed in dermal spindle cells, supporting the diagnosis of dermatofibrosarcoma protuberans, while SMA staining is negative, consistent with the typical immunophenotype and aiding in the exclusion of smooth muscle tumors.



**Fig. 4.** Postoperative photograph taken 2 months after Mohs micrographic surgery and bilobed flap reconstruction. Complete healing without recurrence or complications is observed.