Becker's nevus is an acquired pigmentary disorder characterized by asymmetrical, circumscribed hyperpigmentation frequently affecting the chest, shoulder, scalp, and face and is accompanied by hypertrichosis. The neck can be less frequently asymmetrically involved without coexisting symptoms. In this study, we describe a rare case of Becker's nevus with coexisting pityriasis versicolor.

A 20-year-old male patient presented with a mild pruritic brownish patch with focal hypertrichosis and acneiform eruptions on the right neck for 15 years (Fig. 1A and B). The pig-

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**Fig. 1.** (A) Well-demarcated irregular brownish patches unilaterally seen on the right neck. (B) Close-up view: even, brownish-colored patch with focal hypertrichosis (red arrowhead) and acneiform eruption (blue arrowhead).
mented lesion had gradually developed along with an itchy sensation more than a year before he visited us. Compared with its initial presentation, the lesion also slightly grew in size over time.

Application of 10% potassium hydroxide (KOH) to the neck to examine the lesion showed presence of fungal spores and hyphae. Histopathologic examination of the lesion showed fusion of irregularly elongated rete ridges, mild basal layer hyperpigmentation, and increased pilosebaceous units, supporting Becker’s nevus presentation (Fig. 2A and B). Several fungal spores were also observed in the stratum corneum layer on staining with D-PAS (Fig. 2C). On the diagnosis of pityriasis versicolor, application of terbinafine hydrochloride antifungal cream was initiated on the pigmented lesion for 2 weeks, and the pruritus prominently diminished. The 10% KOH examination was performed again, with its results being negative for the presence of fungal elements.

Becker’s nevus is an androgen-dependent organoid lesion which irregularly enlarges, especially in adolescence owing to the effect of androgen. It is associated with pilar smooth muscle hamartoma, melanoma, basal cell carcinoma, vitiligo, and fungal infection.

Becker’s nevus with pityriasis versicolor was first noted by Wright in 1979, and very few researchers have reported on this association. However, no definite relationship has been revealed between the nevus and fungus in immunocompetent adults. It is believed that functional and structural enlargement of pilosebaceous glands in Becker’s nevus may provide a favorable environment for fungal growth, especially for Malassezia, which has a lipophilic nature. High lipid content of the cell walls may act as a protective factor for the Malassezia yeast from being phagocytosed and down-regulates the inflammatory immune response. In a recent study, androgen receptor overexpression was detected in the pilosebaceous glands of Becker’s nevus, while estrogen and progesterone receptor overexpression was not observed in the sebaceous glands. Thus, the increased androgen concentration in the adolescent male patient in this case may have contributed to the symbiosis of these dermatoses, firstly by stimulating the androgen-sensitive sebaceous gland, and secondly by down-regulating the inflammatory immune response.

Consequently, although rare, dermatologists should be aware that Becker’s nevus can provide a favorable environment for fungal growth, especially during adolescence, and that it can be treated with antifungal agents with a favorable outcome.
CONFLICT OF INTEREST

In relation to this article, we declare that there is no conflict of interest.

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PATIENT CONSENT STATEMENT

The patient provided written informed consent for the publication and the use of his or her images.

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