A Retrospective, Single-institution Cohort Analysis on Pediatric Keloids in Asian

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BACKGROUND
Knowledge of the cause, distribution, therapeutic strategy, and factors associated with relapse in adult keloids has been well-elucidated. However, there is a lack of established data on clinical features, treatment options, and recurrence rate of pediatric keloids in Asian population.

METHODS
The aim of the study was sought to address clinical characteristics by comprehensively categorizing into pre-puberty group and puberty group among pediatric keloid patients at a single tertiary referral center and evaluating: (i) the epidemiology on pediatric keloids, (ii) the effect of applied treatment on prevention of recurrence, and (iii) differences from adult keloid patients.

Patients aged less than 18 years, newly diagnosed with keloids and previously untreated, were selected for our retrospective analysis from January 2007 to December 2021. Data including age at outpatient diagnosis of keloid, sex, race, comorbidity, family history, associated symptoms, etiology, anatomical location, treatment modalities, follow-up duration, and recurrence were collected.

RESULTS
Of the 86 patients among pediatric keloid cohort, 47 (54.7%) were female and 39 were male (45.3%), with a mean age of 14.49 years. Head and neck area was the most commonly involved area (n= 40, 38.5%). The most common causative factor was trauma (n= 35, 40.2%), followed by surgery (n= 21, 24.1%), and inflammatory skin disorders (n= 19, 21.8%). 72 patients had combination treatment, of which laser treatment with triamcinolone acetonide intralesional injection (n= 18, 25.0%) was the most commonly applied therapeutic method to our cohort. The mean duration of follow-up was 8.7 months, with an overall recurrence rate was 15.4%.

CONCLUSİON
We found that pediatric keloids in Korean cohort were occurred, treated, and progressed in a variety of ways. Our findings can underscore that the therapeutic considerations of dermatologists within their current scope of practice for pediatric keloids. To extend understanding of the interplay between causative factors and pediatric keloid formation, future study should capture larger numbers of children with keloids and longer observation.

Figure 1. Ear keloid in a 6-year-old female patient.