Cartesian Model of Clinical Behavior of Keloid Disorder, Implementation and Update of the Keloid Staging System and Call for Establishment of International Keloid Registry

Michael H. Tirgan, MD

Michael H. Tirgan, MD

Keloid Research Foundation

Corresponding Author
Michael H. Tirgan, MD
23 West 73rd Street, Suite GD, New York, NY 10065
(212) 874 4200
htirgan@gmail.com

Running Title
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BACKGROUND

BKeloid disorder (KD) has highly variable clinical behavior. KD ranges from patients who in their lifetime develop one or a few keloid lesions to those who within a few years develop very extensive disease involving various parts of their skin. To the author's knowledge, this very important aspect of the disorder has never been studied and thus never incorporated into an analysis of clinical or laboratory data from keloid patients.

OBJECTİVE

To assess clinical behavior and rate of progression of keloid disorder through an analysis of data from two large cohorts of keloid patients.

MATERİAL AND METHODS

This is a retrospective analysis of two datasets. The first dataset was obtained from 971 consecutive patients seen by the author in his keloid specialty practice. Medical records and photographs of the lesions were analyzed.

The second dataset was obtained from an ongoing online keloid survey that the author launched in November 2011. Survey participants were asked to provide answers to numerous questions about their keloids, including an assessment of the growth rate of their keloids over time. The underlying studies for both datasets were approved by the Institutional Review Board (IRB). Descriptive statistics are provided. Patterns of clinical progression of KD are plotted in Cartesian tables.

RESULTS

A review of the clinical patterns of presentation and KD's duration allows for plotting the patients' results into Cartesian tables and therefore clustering patients with similar patterns of disease progression. Seventy-eight patients (8.02%) were found to have stage I KD beyond 15 years since the onset of their illness. On the other hand, 52 patients (5.35%) developed stage II disease,15 patients (1.54%) developed stage III disease and four patients (0.41%) developed stage IV disease within the first three years of the onset of their illness.

Approximately, one third of the survey patients reported having stable disease and no progression of their KD at one-, two-, five- and ten-year timepoints. About 10% of patients reported a 50% increase, and approximately 6% reported doubling of the size

of their keloids at one-, two-, five- and ten-year timepoints.

CONCLUSİON AND RELEVANCE

Proper comparison of clinical and/or laboratory outcome data is meaningful only when such a comparison is made among patients with similar biology and clinical behavior. The author recommends that keloid researchers incorporate the variable patterns of clinical behavior of KD in planning clinical or laboratory experiments, as well as in analysis of their data. Call is made for all keloid researchers to collaborate in establishing an international Keloid Registry.