

Serum level of Interleukin -17 in the patients with cutaneous warts

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Abstract

Cutaneous warts are widespread in the worldwide population. Cutaneous warts are the most common cutaneous infection occurring when immune function is impaired. High immunity leading to wart regression is essentially universal, but poorly understood. Hereby, it is worth mentioning that, to the best of our knowledge, the serum levels of IL17 cytokine profile were not studied in cutaneous warts before.

Keywords : Cutaneous warts, Human papilloma virus, Immunity, Interleukin-17 (IL-17)

INTRODUCTION

Cutaneous warts characterized by hyperkeratinization occur following infection at the basal layer and clonal proliferation (1).

Cell-mediated immunity (CMI) probably plays a significant role in wart regression; patients with CMI deficiency are particularly susceptible to HPV infection and are notoriously difficult to treat (2). Increased understanding of the importance of cellular immunity in clearance of HPV infections has led to therapeutic trials (3).

Interleukin-17 (IL-17) has emerged as a central player in the mammalian immune system. Originally IL-17 was thought to be produced exclusively by T cells but it is now known to be secreted by a variety of innate cells (4).

RESULTS

The present study found that there was a statistically significant difference between serum levels of IL17 in the patients with different cutaneous warts and healthy control participants. Serum levels of IL17 were significantly decreased in the patients with cutaneous warts.

Table: Comparison between patients and controls as regard serum levels of IL 17.

Variable	Patients	Controls	P value
IL 17 (Pg/ml) Mean (±SD)	89.4 (81.2)	123.1.44 (66.5)	0.001

IL17: Interleukin 17. **SD:** standard deviation **P value**< 0.05 significant.

While autoimmune diseases were mostly accompanied by IL-17+ T cells (5).

AIM OF WORK

The aim of the work is to investigate the serum level of interleukin 17 in patients of different cutaneous warts.

METHODS

This study was designed as a case - controlled study to investigate the serum levels of IL17 in the patients with cutaneous warts. This study included 60 patients with clinical evident different cutaneous warts and 20 healthy control subjects from the outpatient clinic of the Dermatology and Venereology department, Hurghada general hospital. Interleukin 17 levels were determined by enzyme-linked immunosorbent assay (ELISA).

This study found that there was no statistically significant correlation between serum levels of IL17 in the patients with cutaneous warts and age, sex of the patients, number of the warts, duration of the disease, smoking, types of the warts, recurrence, and family history.

DISCUSSION

Cutaneous warts caused by the human papillomavirus (6). Cutaneous warts are the most common cutaneous infection occurring when immune function is impaired (7). Substantial effort has been directed to understand the role of the host's immune response in the natural history of HPV, and in particular, anti-viral, cell-mediated immunity (8). Manipulating the immune system to achieve a therapeutic or protective response against diseases caused by HPV is an active field of investigation (9).

CONCLUSION

This study concluded that there was a statistically significant low serum levels of IL17 in the patients with different cutaneous warts compared with healthy participants that may contribute to development and maintenance of different types of cutaneous warts which depend mainly on the defect of cell mediated immunity.

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