

Cytokine serum levels in patients with cervical intraepithelial neoplasia grade II-III treated with intralesional interferon- α 2b

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ABSTRACT

Aims and background. Cervical intraepithelial neoplasia (CIN) grade II-III is being diagnosed in younger women and, because of the reproductive age range for women and the habits associated with a modern lifestyle, is now affecting a broad age range. Surgical treatment for CIN has been associated with premature amenorrhea, low birth weight, and premature labor and birth. It is therefore imperative to develop clinical treatments for CIN, such as conservative treatment with interferons. The object of the present study was to evaluate the behavior of cytokines (IFN- γ , IL-1 β , IL-2, IL-4, IL-6, IL-8, IL-10, IL-12, TNF- α , TGF β) in the serum of patients with an initial diagnosis of CIN II-III.

Methods. Ten patients with CIN-CIN II (60%, n = 6) and CIN III (40%, n = 4), 23 to 51 years of age and who had not received any prior treatments, were evaluated. The patients were given 3 million/UI (per cm² of colposcopic lesion) of human recombinant IFN- α 2b by intralesional administration (18 applications on alternate days). Before treatment, in the 6th, 12th, and 18th applications, blood was collected from the patients for cytokine analysis using ELISA.

Results. Half of the patients had a good pathologic response; the other half, all of whom were smokers, had therapeutic failure. The average concentration of IL-12 (pg/ml) in the serum of patients who responded well to therapy was elevated from the 12th and 18th application of IFN- α 2b compared to patients who experienced therapeutic failure: 1804.0 \pm 1020 vs 391.2 \pm 722.3 and 1738.0 \pm 2426.0 vs 448.5 \pm 407.2, respectively, $P < 0.05$.

Conclusions. CIN II-III treated with intralesional IFN- α 2b achieved a good response in non-smoking patients and was associated with an increase in IL-12 serum levels.

Key words: cervical intraepithelial neoplasia II-III, cytokines, interferon α -2b, interleukin-12.

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