INTRALESIONAL INTERFERON alpha - 2b IN GENITAL WARTS : A PRELIMINARY STUDY

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Currently available therapy for condyloma acuminata (genital warts) is not consistently effective. Interferon (IFN) has both antiproliferative and antiviral properties and has been used to treat genital warts with varying degree of success. We conducted an open study on 6 male patients with genital warts. A single wart of comparable area from each patient was injected with 2 x 10^6 IU of IFN alpha-2b, 3 times weekly for 3 weeks. The response to treatment was assessed during the therapy and at 1,5 and 9 weeks after the completion of treatment. Two of the injected lesions showed complete regression and in 2, there was a moderate reduction in size but not a complete regression. In 2 patients there was appearance of new lesions while still on therapy and only a slight reduction in the size of injected lesions. All patients tolerated the therapy well and in none treatment had to be discontinued due to adverse reactions. The preliminary trial suggests that intralesional IFN is not a superior alternate to the currently available modalities of treatment in genital warts. High cost of the therapy is another limiting factor.

Introduction

Condyloma acuminata (genital warts) are common, benign epithelial growths that occur in genital and perianal areas. Genital warts (GW) are highly contagious and are caused by papilloma viruses. They often persist for prolonged periods and are distressing to the patients. A variety of treatment modalities for genital warts are available including application of podophyllin resin, surgical excision, cryosurgery, electrocauterisation, and laser therapy, but none are consistently effective.[1]

Human leucocyte interferon has antiproliferative, antiviral and immunomodulatory properties. A few recent studies suggest that interferon (IFN) may be effective in the treatment of condyloma acuminatum.[2-5] We report here our experience with intralesional recombinant interferon alpha-2b therapy in patients with genital warts.

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Material and Methods

Six young male patients (aged 21-30 years) suffering from genital warts (GW), participated in an open study. The duration of their lesions ranged from 2 to 5 weeks (average 3.3 weeks). Clinical diagnosis was supported by histopathology in all of them. None of these patients had received any antiwart therapy during the preceding 3 weeks of the study. The number of lesions, size and the morphology of warts was recorded in every patient. The presence of any other concomitant sexually transmitted diseases was excluded by a thorough clinical examination, a negative VDRL test for syphilis and Elisa test for HIV infection. Routine haemogram, liver and renal function tests were done in every patient prior to the start of therapy and then repeated after the completion of therapy. Two patients had 2 warts; one each had 3 and 4 warts respectively, while the remaining two had multiple warts (>5 in number). The warts were present either on the undersurface of the prepucial skin or on the coronal sulcus and were of exophytic type. A single wart of

comparable area from each patient was chosen for intralesional interferon alpha-2b injection. Injection was given into the base of each chosen wart, in the dose of $2x10^6$ IU 3 times a week for 3 weeks (a total of 9 injections). The mean wart area before the therapy was 29.5 mm^2 (range 27 - 32 mm^2).

The patients were evaluated for the efficacy and safety of IFN on each visit of the injection and at 1,5 and 9 weeks after the completion of the treatment. The response to therapy was arbitrarily graded after 12 weeks as poor, fair, good or excellent as per the following criteria :

Poor : <50% regression in the area of injected wart, and/or appearance of new lesions while still on therapy and thereafter.

Fair : 50-75% regression in the area of injected wart, other lesions remaining unchanged.

Good : >75% reduction in the area of injected wart but not a complete regression, other lesions not showing appreciable decrease in size or number.

Excellent : Complete disappearance of injected wart(s) and/or an appreciable decrease in the size and total number of other warts as well.

Results

Two lesions showed excellent response with complete regression in 6 and 7 weeks of therapy. None of the regressed wart showed a recurrence during the 12 week follow up period. In 2, the response was good and in other 2 it was poor. In these 2 patients with poor response new lesions continued to appear while the patients were still on treatment. In patients showing excellent and good response, the response was appreciated at 2-3 weeks with maximum response occurring at 5-6 weeks of therapy. All the patients experienced 'flu' like symptoms on the day of administration of interferon which were managed by tablet paracetamol. These symptoms became milder during the course of therapy. No local adverse reactions were seen at the injection sites. The laboratory parameters during and after the completion of therapy did not show any significant alteration. The clinical profile of the patients and the response to intralesional interferon therapy is shown in Table-I.

Comments

Recombinant interferon (r-IFN) has been used in the treatment of genital warts with varying degree of success.[1-12] The response to interferon in the present

Table I. Clinical profile of the patients

S.No.	Age (yrs)	Duration of ds(wks)	Total No. of lesions	Area of lesion (mm^2)		Response to Tt
				Pre Tt	Post Tt	
1	26	4	2	30	0	Excellent
2	23	2	2	32	0	Excellent
3	28	3	3	28	6	Good
4	21	2	4	32	4	Good
5	30	4	7	27	18	Poor
6	23	5	11	28	15	Poor

Abbreviations : Tt - Treatment; ds - Disease, No - Number.

study was not encouraging. Only 2 of the injected lesions showed excellent response with a total disappearance of lesions in 6 and 7 weeks of therapy respectively; the regression started 2 weeks after begining therapy. The response in 2 lesions was good and in other 2 it was poor. The patients (2) with multiple warts (>5) responded poorly. In these patients there was appearance of new lesions while still on therapy and on discontinuation of treatment. The poor response of multiple genital warts to intralesional IFN-alpha-2b therapy has been reported in the past too.[6] The cause for a variable response to IFN therapy is not exactly known. It has been suggested that dose of IFN, duration of therapy and the difference in the strain of viruses causing GW may have some influence on the response to the therapy.[9,12] We, however, could not type the viral strain responsible for genital warts in our patients. No effect was observed in non-injected lesions in any of our patients which supports the view that intralesional IFN therapy lacks systemic response.[7] The results of our preliminary study suggests that intralesional interferon therapy is not a superior alternate to the currently available modalities for the treatment of genital warts. The prohibitively high cost of interferon therapy is another limiting factor in its usage.

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