A COMPARATIVE STUDY OF CANTHARIDIN-PODOPHYLLINE RESIN-SALICYLIC ACID FORMULATION AND HYDROGEN PEROXIDE CREAM IN COMMON WARTS OF THE HANDS WITH REFERENCE TO THE BASIC (PRETREATMENT) SERUM LEVEL OF MACROPHAGE MIGRATION INHIBITORY FACTOR (MMIF)

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Introduction

There is a multitude of topical preparations and therapeutic strategies for the treatment of common warts but none of them is universally preferred. Topical hydrogen peroxide, a remarkably safe agent in low concentrations has been recently reported to be effective in wart therapy while cantharidin, a strong blistering agent has been known over years as one of the standard topical preparations.

The incidence of warts has been reported to increase in immunosuppressed allograft recipients as well as in patients with certain immunodeficiency syndromes, especially those with a defective cell mediated immune response. Host defense against HPV relies on intact and functioning cellular immunity including T-cell and natural killer cell cytotoxicity. Therefore, in patients in whom warts are severe or recalcitrant, concern for immune defects is raised, and it may be presumed that the macrophage migration inhibitory factor (MMIF) has a role in this respect . This cytokine is a critical immune regulatory factor, playing a role in the regulation of macrophage function in host defense by regulation of a number of proinflammatory cytokines including tumor necrosis factor (TNF) and interleukin-1 (IL-1)

Aim of the work

To make a controlled study of the efficacy and safety profile of cantharidine-podophyllin resin salicylic acid formulation in comparison with hydrogen peroxide cream in the treatment of recalcitrant common warts of the hands.

To correlate the therapeutic effect of these topical agents with the basic pretreatment serum level of macrophage migration inhibitory

Patients and Methods

MIF concentrations were calculated in ng/mL; these results were interpolated in a calibration curve of known concentrations included in the insert and the sensitivity of the kit was 8 pg/mL.

The patients had been divided into three groups each of 20 patients additional 10 patients were added during the course of the study:

Group I had been treated with CPS (1% cantharidine, 20% podophyllin, 30% salicylic acid) formulation without curettage, the process was repeated every 2 weeks.

Group II was treated with hydrogen peroxide 1% cream, It was applied to the wart and allowed to dry for a few minutes,this was repeated twice daily for 3 weeks.

Group III underwent placebo treatment

Group IV control

Group V was treated with hydrogen peroxide 5% cream, twice daily for 3 weeks.

Results

Table 1: Comparison between groups as regards the final results of treatment.

Results	Group (I) (n=20)		Group (II) (n=20)		Group (III) (n=20)		Group (V) (n=10)		P Value
	No.	%	No.	%	No.	%	No.	%	
Completely Cured	8	40.0	0	0	0	0	2	20.0	<0.001*
Reduction in Wart number	10	50.0	15	75.0	2	10.0	6	60.0	
Overall effectiveness	(90%)		(75%)		(10%)		(80%)		
No change	2	10.0	5	25.0	18	90.0	2	20.0	
Total	20	100	20	100	20	100	10	100	
P_1 value	<0.001*		<0.001*				<0.001*		

Table 2: Comparison between the groups as regards serum level of macrophage migration inhibitory factor (MMIF)

Macrophage migration inhibitory factor (MMIF) (ng/ml)	Group (I) (n=20)	Group (II) (n=20)	Group (III) (n=20)	Group (V) (n=10)	Group (IV) (n=20)
Min.-Max.	0.49-0.97	0.47-0.93	0.48-0.92	0.51-0.85	3.20-4.23
Mean± S.D	0.72±0.141	0.71±0.142	0.74±0.155	0.70±0.110	3.60±0.286
P Value	0.890				
	<0.001*				

Table 3: Relation between patients' clinical response and MMIF

Therapeutic response	Group (I) (mean MMIF(ng%)) (n=20)	Group (II) (mean MMIF(ng%)) (n=20)	Group (III) (mean MMIF(ng%)) (n=20)	Group (V) (mean MMIF(ng%)) (n=10)	P Value
Completely Cured	0.77±0.092	---	-----	0.76±0.064	0.890
Reduction in Wart number	0.70±0.172	0.75±0.181	0.86±0.092	0.62±0.156	
No change	0.61±0.566	0.69±0.130	0.72±0.157	0.59±0.007	

Conclusion

CPS preparation is more effective than hydrogen peroxide in the treatment of palmar warts but with more side effects.

MMIF has an important role in the occurrence of warts which highlights the defect of cell mediated immunity.

MMIF is not related to the disease extent (in the form of wart number) or the therapeutic response.