

"TAURINE AND PSORIASIS"

By

BHANU S. VERMA M. B., B. S., D. V. & D., D. D. V., F. C. P. S., Ph. D. (London),
Head, Department of Skin and V. D. Medical College, Baroda

The problem of Psoriasis, inspite of the many researches that have been conducted to establish its etiology and cure, still remains unsolved. Though, no 'cure' for psoriasis has been found so far, it is interesting to note that a particular type of therapy or diet regime may clinically improve the psoriatic condition considerably. On the other hand, certain types of diet regime and therapy are found to deteriorate the condition.

The author, has frequently found patients reporting that they feel better on a vegetarian rather than a non-vegetarian diet. Though no rationale is found for this, patients have shown positive improvement.

An American White female, the author's patient, who has had psoriasis of 42 years duration, reported that she got worse on certain non-vegetarian foods i. e. Pork and Oysters. She further reported that her lesions got worse and more irritated when these meats were canned rather than fresh.

Recently, Roe and Weston¹ have postulated that Taurine is responsible for inducing and maintaining psoriatic states. Further, they have analyzed the content of taurine in various non-vegetarian foods. It is not yet known whether taurine would also induce similar exacerbations in eczema patients.

Taurine has the following chemical properties.²—2-Aminoethanesulfonic acid. $\text{NH}_2\text{CH}_2\text{CH}_2\text{-SO}_3\text{H}$; mol. wt. 125.14. $\text{C}_2\text{H}_7\text{NO}_3\text{S}$; C 19.19%, H 5.64%, N 11.19%, O 38.35%, S 25.62%. Present in bile combined with cholic acid; occurs also in lungs and flesh extract of oxen, in shark blood, in mussels, in oysters. Generally isolated from ox bile; or from the large muscle of abalone (*Haliotis*): Synthesis starting with 2-bromoethane-sulfonate: Synthesis by sodium sulfite sulfonation of ethylene chloride followed by ammonolysis with anhydrous NH_3 or with aqueous NH_3 and ammonium carbonate.

Large monoclinic prismatic rods. Decomp. about 300° . Soluble in 15.5 parts of water at 12° . 100 parts of 95% alcohol dissolve 0.004 parts at 17° . Insoluble in absolute alcohol. Apparent K_a at $25^\circ = 1.8 \times 10^{-9}$ K_b 3×10^{-13} . True $K_A =$ about 1.0; K_B $10^{-5.1}$.

The object of this study was to investigate the clinical effect of taurine on psoriatics and eczema patients.

MATERIAL & METHODS:—

Five typical cases each of psoriasis and extensive eczemas were taken along with a normal control group of five. All of them were administered 500 mg. of

taurine, every 6 hours, for two consecutive days. All the subjects of this study were given the same vegetarian diet. The subjective and objective responses of the patients were then recorded. The criteria of objective deterioration was the evidence of irritation or extension of existing lesions and also the appearance of fresh lesions. While the criteria for subjective deterioration was the onset of itching and irritation in psoriasis and worsening of this state in eczema cases.

RESULTS :—

The number of patients showing deterioration after Taurine ingestion are given in the following table.

Disease	Hours															
	6		12		18		24		30		36		42		48	
	Ob.	S.	Ob.	S.	Ob.	S.	Ob.	S.	Ob.	S.	Ob.	S.	Ob.	S.	Ob.	S.
Psoriasis	Nil	1	1	2	1	3	1	4	2	4	2	4	3	5	3	5
Eczema	Nil	1	1	1	1	2	2	3	2	3	2	3	2	3	2	3
Normal controls	Nil	1	Nil	1	Nil	1	Nil	1	Nil	1	Nil	1	Nil	1	Nil	1

Ob=Objective deterioration.

S=Subjective deterioration.

The itching in psoriatics lasted on an average for 12 hrs. while in the eczema patients, it lasted for 18 hours. In one normal control, it lasted for six hours.

DISCUSSION

From the results of this study, it appears that in a majority of cases, in this very small sample, taurine produced exacerbation of lesions, irritation and pruritus. The same phenomenon was observed in eczema patients, but to a lesser extent. It, therefore, appears that deteriorating effect of ingestion of taurine is not specific to psoriasis as it has been noted in eczema cases also, though to a much lesser degree. The itching noted in normal control is probably due to suggestion.

The taurine content varies from food to food, e. g. Roe and Weston's analysis of foods has clearly shown that taurine is found much more in sea foods e. g. oysters. As mentioned earlier in the introduction, it is interesting to note that the author's American patient complained that her lesions got more irritated when the meats were canned. It may be possible that the taurine content in canned foods is higher than in fresh foods.

Since the majority of the population of Gujarat is vegetarian and even their non-animal protein intake is very limited, it would seem highly unlikely that taurine is a major etiological factor in psoriasis. The function and fate of taurine in human beings still remains obscure. It would, therefore, be interesting to study this in Psoriasis and Eczema patients.

SUMMARY & CONCLUSIONS

I. The clinical effect of taurine ingestion on Psoriatics, Eczema patients and a normal control group was studied.

2. The exacerbations of psoriasis and to a lesser extent, of eczema were seen after taurine ingestion.

3. As psoriasis is common in Gujarat State, where a majority of people are vegetarian and consume a low non-animal protein diet, it is emphasized that it would be unlikely that taurine ingestion is a major etiological factor in psoriasis.

4. A plea is made for investigating the taurine content of vegetarian foods; as well as its fate in human beings, including psoriasis and eczema patients.

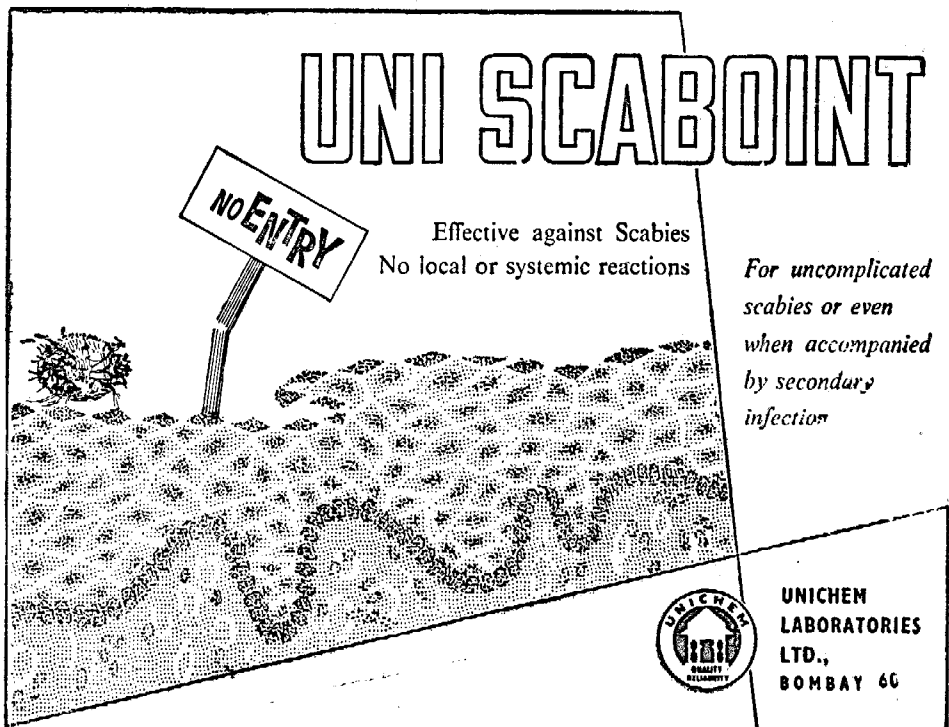
ACKNOWLEDGEMENT

The author wishes to acknowledge the help of Dr. A. D. Joseph, Dean of Medical College, Baroda for his help in this work.

Thanks are also due to Dr. A. P. Kenny, W. H. O. Visiting Professor in Clinical Biochemistry, for making taurine available for this study.

REFERENCES

1. Roe D. A. & Weston M. O. Nature (London) 205 : 237-288, 1965.
2. The Merck Index of Chemicals & Drugs. Pub. Merck & Co., Inc. Rahway, N. J., U. S. A. Pg. 1013, 1960.



UNI SCABOINT

Effective against Scabies
No local or systemic reactions

For uncomplicated scabies or even when accompanied by secondary infection

UNICHEN LABORATORIES LTD., BOMBAY 60

UNICHEN
QUALITY
RELIABILITY