

Taste Sensitivity to Phenylthiourea among Patients affected with both Tuberculosis and Leprosy *

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Introduction

A correlation between taste sensitivity to phenylthiourea and leprosy was recently suggested (Beiguelman, 1962; 1964). In these investigations, a significant lower frequency of non-tasters among Caucasoid lepers (19.6%; No. = 2459) was found as compared to controls from the same populations (24.7%; No. = 1000).

Saldanha (1956) among tuberculous Brazilian subjects also found a lower frequency of non-tasters (14.11%; No. = 496). Saldanha's results were contested by Åkesson (1959) in Sweden, the discrepancy being ascribed to a socio-economical stratification of Saldanha's data. However, this difference could perhaps be explained by the fact that tuberculosis is better controlled in Sweden than in Brazil, where this disease is endemic.

Since tuberculosis and leprosy present analogies from serological, immunological, clinical and epidemiological viewpoints, tuberculous patients and lepers, as a whole, should react parallelly in tasting phenylthiourea. On these grounds, it is expected that the frequency of non-tasters for phenylthiourea could be lower among subjects affected with both tuberculosis and leprosy.

The purpose of the present paper is to report data on the investigation of taste thresholds for phenylthiourea among the available patients with both leprosy and tuberculosis under medical care in the State of São Paulo, Brazil.

Material and method

A sample of 58 Caucasoid patients affected with both tuberculosis and leprosy was investigated at the *Sanatório Pirapitingui*, State of São Paulo, Brazil. All subjects were tested by mean of a serial dilution of phenylthiourea with a sorting test, as described by Harris & Kalmus (1949).

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Results and conclusion

Table 1 shows the taste thresholds for phenylthiourea of the subjects investigated and Fig. 1 shows the hystogram of the distribution of these thresholds.

As it can be seen in Fig. 1, the antimodal value taken for separation of the tasters from the non-tasters, falls at the solution 3. Using this value as an antimode, the frequency of non-tasters among these patients was estimated as 12.1%. This value differs significantly from that found among the healthy white Brazilian population

Tab. 1. Distribution of taste thresholds among 58 patients affected with both tuberculosis and leprosy

Solution no.	<1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Total
Patients	2	3	2	0	1	2	4	1	4	10	10	12	5	2	0	58

(24.7%; No. = 1000; $\chi^2 = 4.794$; 1 d.f.; $P < 0.05$) but it is similar to that obtained by Saldanha (1956) among tuberculous people. Even assuming the antimode at the solution 5, as it is found among the white populations, the frequency of non-tasters remains very low (13.8%).

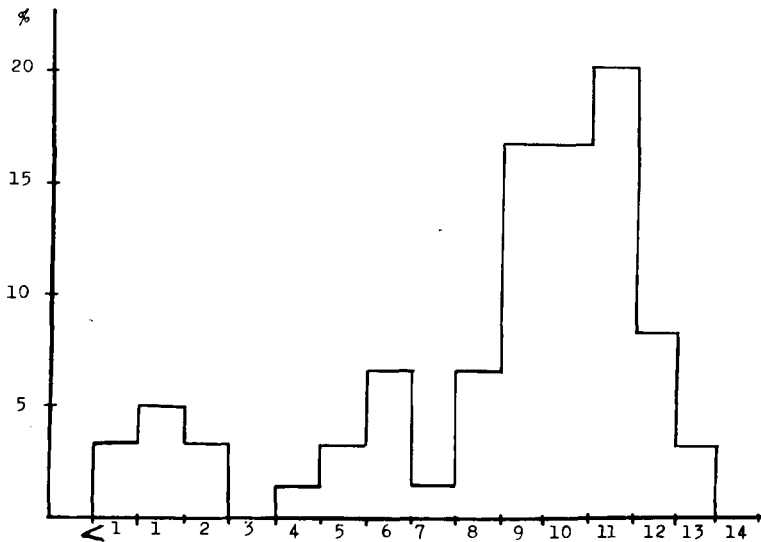


Fig. 1. Hystogram of the distribution of the taste thresholds of 58 patients affected with both tuberculosis and leprosy

In spite of the smallness of the present sample, the results are in agreement with the data previously published (Saldanha, 1956; Beiguelman, 1962; 1964). Further investigations on this subject would be of great interest.

Summary

Taste thresholds for phenylthiourea were measured among 58 Caucasoid subjects affected with both tuberculosis and leprosy. The frequency of non-tasters among them (12.1%) is significantly lower than that found among healthy controls (24.7%) but not different from the frequency of non-tasters among tuberculous patients (14.1%) or leprosy patients (19.6%). These results suggest a correlation between taste ability to phenylthiourea and the constitutional susceptibility to tuberculosis and leprosy.

References

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RIASSUNTO

È stata calcolata la soglia del gusto per la feniltiourea in 58 pazienti Caucasicci affetti sia da lebbra che da tubercolosi. L'incidenza di non-gustatori (12,1%) riscontrata in questo gruppo è significativamente inferiore a quella riscontrata nel gruppo di controllo (24,7%), ma non lo è ugualmente rispetto a quella che si riscontra nei pazienti affetti da tubercolosi (14,1%) o da lebbra (19,6%). Tali risultati suggeriscono una correlazione fra la capacità gustativa per la feniltiourea e la recettività costituzionale alla tubercolosi ed alla lebbra.

RÉSUMÉ

Le seuil du goût pour la phénylthiourée a été calculé chez 58 sujets Caucasiens atteints de tuberculose et de lèpre. La fréquence de non-goûteurs (12,1%) trouvée dans ce groupe est significativement moins élevée que celle du groupe de contrôle (24,7%), mais ne l'est pas également en comparaison de celle que l'on trouve chez les tuberculeux (14,1%) et chez les lépreux (19,6%). Ces résultats semblent en faveur d'une corrélation entre le goût pour la phénylthiourée et la susceptibilité constitutionnelle à la tuberculose et à la lèpre.

ZUSAMMENFASSUNG

Bei 58 kaukasischen Lepra und Tuberkulosekranken wurde die Geschmacksschwelle für Phenylthiourea errechnet. Die in dieser Gruppe beobachtete Frequenz von Nicht-Schmeckern (12,1%) ist wesentlich niedriger als bei der entsprechenden Kontrollgruppe (24,7%), aber nicht so viel niedriger als bei Patienten, die entweder an Tuberkulose (14,1%) oder an Lepra (19,6%) litten. Diese Ergebnisse lassen vermuten, dass zwischen der Geschmacksempfindlichkeit für Phenylthiourea und der konstitutionellen Empfänglichkeit für Tuberkulose und Lepra ein Zusammenhang besteht.