

SECRETOR STATUS AS A GENETIC MARKER IN DUODENAL ULCER - A COMPARATIVE STUDY

Pages with reference to book, From 243 To 244

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It has long been established that various human body secretions like saliva, semen, gastric juice contain blood group antigens¹. The individuals whose body fluids other than blood contain blood group antigens are known as secretors whereas the rest are non- secretors. The secretor status of an individual is a genetically controlled factor. The role of genetic factors in the pathogenesis of duodenal ulcer is well established²⁻⁴. Support for hereditary tendency in duodenal ulcer is contributed by the occurrence of duodenal ulcer in both members of the monozygotic twins⁵. This observation was strengthened by a significant association between blood group "O" and duodenal ulceration⁶. Clarke⁵ found a higher frequency of non-secretors in duodenal ulcer patients than in controls. This study reports the secretor status of endoscopically proven cases of duodenal ulcer and apparently healthy controls and comparisons of our results with those reported by other investigators⁵.

PATIENTS, METHODS AND RESULTS

A total of 70 endoscopically proven duodenal ulcer cases and 100 healthy individuals were included in the study. The processing, storage and analysis of the saliva was carried out according to the procedure reported earlier⁷. The data was subjected to statistical analysis using chi-square test. Non-secretors were more frequent in duodenal ulcer cases than in controls ($p < 0.01$) particularly those with blood group O (Table I).

TABLE I. Non-secretor status.

Blood groups	Controls (%)		Patients (%)		P value
	Non-secretors	Secretors	Non-secretors	Secretors	
A and B	27.5	72.5	45.0	55.0	NS
O	20.0	80.0	43.0	57.0	<0.05
All groups	24.0	76.0	44.0	56.0	<0.01

COMMENTS

The study was based on a case-control comparison for secretors and non-secretors. Non-secretors were significantly more frequent among patients in all blood groups ($p < 0.01$) but the difference was significant only for blood group O ($p < 0.05$). These observations are consistent with those reported in earlier studies⁵. Among controls, the frequency of non-secretors was significantly higher ($p < 0.05$) in Karachi than Rawalpindi⁷ and in United Kingdom⁵ than the combined data of the two studies done in Pakistan (Table II).

TABLE II. Comparison of secretor status for controls.

Status	Rizvi et al.			Clarke et al ⁵	P value
	Karachi	Rawalpindi ⁷	Total		
Secretors	76%	85%	80.5%	74.7%	<0.001
Non-secretors	24%	15%	19.5%	25.3%	<0.001

***The significant difference is for combined data from Rawalpindi and Karachi when compared with Clarke et al.**

This may indicate that the Pakistani population is genetically less predisposed to duodenal ulcer than that of the United Kingdom or the difference may simply be due to higher frequency of blood group O in the Caucasians as compared to non-Caucasians⁸. A more comprehensive population based study may define the group more predisposed to develop duodenal ulcer disease.

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