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Correspondence

Haptoglobin phenotypes

SIR, Haptoglobin (Hp) concentrations in serum are invariably raised in active rheumatoid arthritis (RA) and demonstrate a strong correlation with other measures of disease activity.[1] Allison and Blumberg reported that the frequency of the common Hp phenotypes (Hp 1–1, Hp 2–1 and Hp 2–2) in 35 patients with RA was not different from that found in 185 normal subjects.[2] The number of patients involved in the study were small, so we have noted the Hp phenotypes for 177 caucasian patients with active RA (ARA criteria) and 48 patients with ankylosing spondylitis (AS) (New York criteria). The results are compared with previously reported data as shown in Table 1.

The normal data from 2 sources are conflicting, making it difficult to assess the results. Despite this discrepancy our results for RA show a closer agreement with the normal distribution than Allison and Blumberg's original series, thus supporting their view that patients with RA do not differ significantly in their Hp phenotype frequency. However, comparing our own data for RA and AS, we find the ratio of Hp 2–1 to Hp 2–2 is approximately 1:1 and 2:1 respectively. The AS group therefore appears to have an altered proportion of Hp 2–1 and Hp 2–2, but a larger sample size may be required to confirm this observation. It may also be of interest to consider the Hp phenotypes of other seronegative arthropathies.

The level of disease activity, as defined by plasma viscosity and CRP measurements (Table 2), showed no significant difference between the phenotypes within either disease group when tested by a one-way analysis of variance. These data are of interest in view of the current interest in genetic aspects of arthritic diseases. The molecular structure of Hp is similar to that of immunoglobulins, comprising 2 identical heavy β chains and 2 identical light α chains. The structure of the α and β chains are controlled by 2 separate chromosomal loci. The α locus is on the sixteenth chromosome, but it is thought that the α and β loci are not closely linked. The phenotypes arise due to variation in the α chain, and the α locus is now thought not to have a linkage with the HLA locus.

We conclude that it is unlikely that different Hp phenotypes indicate different susceptibility for the disease or that a given phenotype is likely to be associated with more active disease.

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References

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2 Allison A C, Blumberg B S. The genetically determined serum haptoglobins in rheumatoid arthritis. *Arthritis Rheum* 1953; **1**: 239–43.
3 Varley H, Gowenlock A H, Bell M. *Practical clinical biochemistry*. 5th ed. London: Heinemann, 1980: **1**.

Table 1 *The occurrence of the common haptoglobin phenotypes expressed as percentages*

Hp phenotype	*Normal Population*		*RA*		*AS*
	Allison and Blumberg[2]	*Varley et al.*[3]	*Allison and Blumberg*[2]	*Present data*	
Hp 1–1	11	15	10	14	8
Hp 2–1	54	35	67	44	63
Hp 2–2	32	50	23	42	29

Table 2 *Mean (± SEM) data for plasma viscosity and C-reactive protein (CRP)*

Hp phenotype	*RA*		*AS*	
	Plasma viscosity (cP)	*CRP (mg dl^{-1})*	*Plasma viscosity (cP)*	*CRP (mg dl^{-1})*
Hp 1–1	1·95 (0·03)	3·65 (0·79)	1·87 (0·06)	3·02 (1·04)
Hp 2–1	1·94 (0·02)	3·88 (0·41)	1·82 (0·03)	2·66 (0·47)
Hp 2–2	1·95 (0·02)	3·79 (0·37)	1·88 (0·07)	1·51 (0·31)

Romanian congress

The IVth Romanian National Congress of Rheumatology, with international participation, will be held in Bucharest on 13–15 October 1983. The themes include: collagenoses in children and in young people; rheumatic manifestations in dysglobulinaemia and lymphocyte disorders; current problems concerning the drugs in inflammatory and degenerative rheumatic disorders; progress in medical and surgical rehabilitation in rheumatology. Simultaneous translation will be provided. There will be a social programme. Further details from the Secretariat, Union of the Societies of Medical Sciences, Progresului Street 10, Bucharest 79.181, Romania.

Directory of sources of information on arthritis

The Arthritis Information Clearinghouse, PO Box 9782, Arlington, VA 22209, USA, has prepared a directory—available free—of 67 private and government organisations that provide information about arthritis.