two rare conditions such as 8q partial deletion and LG syndrome is too unlikely to result from chance. Therefore the possibility must be considered that LG syndrome results from a small chromosomal rearrangement. Alternatively, a Mendelian origin of LG syndrome can be reconciled with cytogenetic data only if due to “a recessive mutation which is unmasked by hemizygosity”.2

The clinical findings in three additional cases with 8q partial deletion,3-8 involving bands 8q24-2, 8q21.3-24.3, and 8q13-22 respectively, do not provide further data to confirm the association hypothesis. All three patients showed some of the non-specific features of the LG syndrome, such as hypertelorism, buluous nose, large protruding ears, and micrognathia, but none of them was reported to have MCE. The lack of the exostotic component of the syndrome could result from the very young age of the subjects (less than one year). Variable penetrance of MCE is suggested by Fryns et al4 and would be consistent with the older ages of the patients described by Bühler et al and Pfeiffer.2

We re-examined one of these three patients5 when 5½ years old, but no exostoses were revealed on x-ray examination of the child. This finding apparently excludes the presence of LG syndrome, although the deleted region in our case overlaps the one described by Bühler et al5 (figure). This does not disprove the association hypothesis, since other factors may explain why subjects with the same chromosomal deletion show different phenotypes (for example, the presence of specific allele(s) in the monosomic region). It must be considered, however, that the absence of overlap of the 8q deleted segment in the subjects with LG syndrome can hardly be reconciled with the idea that a specific cytogenetic imbalance is causally related to the syndrome itself. Although the association hypothesis does not imply that all subjects with 8q deletions show LG syndrome (or a phenocopy), it remains to be explained how a specific phenotype can be determined by two quite distinct 8q deletions.

At present ‘microcytogenetics’ does not appear to clarify the genetics of LG syndrome. This field of research has shown a very promising beginning, but care must be taken in considering new correlations between cytogenetic and Mendelian anomalies.

References

Genes for super-intelligence?

SIR,

Sofaer and Emery1 find that the proportion of speculative users is higher among Mensa members than among their same-sexed sibs. The authors note
the possible unrepresentativeness of Mensa members in sampling people of high IQ, but contend that: “The difficulty of sample selection is removed, however, if comparisons are made not between the sample and the general population, but within the sample between respondents and their relatives”. But does this remove the difficulty? Parker\(^2\) reports that men seldom make passes at girls who wear glasses. So perhaps the girls join Mensa? I suggest that people with glasses are more likely to apply to join Mensa than people without glasses.

This is not to deny that there probably is an association between myopia and IQ. Karlsson\(^5\) found that children who score highly in IQ tests at the age of 7 or 8 are more likely than others to wear spectacles later in their lives. Of course, this finding still leaves open the possibility that environmental rather than genetic causes are responsible.

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References


This letter was shown to Dr Sofaer and Professor Emery, who reply as follows:

SIR,

Dr W H James suggests that people with glasses are more likely to apply to join Mensa than people without glasses, and quotes an epigram by Dorothy Parker in his support. But should we take seriously the evidence of Dorothy Parker, well known for her contradictory attitudes towards the opposite sex? In the first two lines of her poem Men she observes:

“They hail you as their morning star
Because you are the way you are”\(^1\)

presumably specs and all.

In our paper\(^2\) we made no claim to do any more than provide some evidence in support of previously reported associations of high IQ with gout, myopia, and infantile autism.\(^3-5\) We clearly acknowledged that associations can occur for several reasons and that more detailed work is required before a common genetic basis for any disorder and high IQ can be regarded as proven. Dr James seems ready to accept that such associations do exist, at least for myopia.

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References


Genes for super-intelligence?

SIR,

In their article on ‘Genes for super-intelligence?’ (J Med Genet 1981; 18: 410-3) Sofaer and Emery stated that the superior intellectual powers of the higher primates may be to some extent a consequence of high uric acid levels.

This is to let you know that we had the opportunity some time ago to investigate correlations between serum uric acid level and intelligence.\(^1\) We studied 270 children aged 0 to 16 years, including subjects with epilepsy, behaviour problems, and mental deficiency, and exceptionally gifted subjects. The results lend substantial support to the hypothesis that serum uric acid is related to intellectual level in children (mean serum uric acid level in mentally retarded children = 3.98, in exceptionally gifted children = 4.77).

We may add that in our study we decided to investigate a number of children in order to exclude the many variables (stress in adults, eating habits, etc) which could pay an important role in the uric acid levels in the adult population. We could find no other published reports of these investigations undertaken in children.

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Reference