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Maternal Age and Infantile Autism[1]

Christopher Gillberg[2]
Department of Child and Youth Psychiatry, University of Göteborg

In a total population survey of childhood psychosis in the region of Göteborg, 20 children (2 in every 10,000) fulfilled the diagnostic criteria for infantile autism formulated by Rutter. There was a male preponderance with 15 boys and 5 girls. Eighty-five percent of the mothers were older than average. Mean maternal age in the autistic sample was 30.7 years, compared with 26.0 years in the general population. The difference is statistically significant at the .1% level. There was a strong tendency toward increasing risk of autism in the child with increasing maternal age. The fathers too were much older than average.

INTRODUCTION

The risk that a pregnant woman might bear a child with Down's syndrome increases considerably with age (Penrose 1951, 1961). There is a corresponding association between mental retardation and maternal age (Tizard & Grad, 1961). Recently, the risk of minimal brain dysfunction and associated problems such as dyslexia has been observed to increase with maternal age (Gillberg, Rasmussen, & Wahlström, 1979, 1980; Jayasekara & Street, 1978).

Infantile autism has not hitherto been considered to be associated with high maternal age. Lotter (cited by Wing, 1966) reported no evidence of a raised mean maternal age in a British series. However, a review of the literature shows at least two studies of childhood psychosis in which mean maternal age was indeed raised. Treffert (1970), in a survey of 280 psychotic

[1]The author is grateful to Mrs. Gun Jakobsson for helping with the data collection.
[2]Address all correspondence to Dr. C. Gillberg, Torild Wulffsgatan 41, 413 19 Göteborg, Sweden.

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children in Wisconsin, found both maternal and paternal age to be high, and especially so in the 69 cases considered to be infantile autistic. Allanen, Arajärvi, and Vitamäki (1964), in a Finnish study, found a mean maternal age of 35 years at the time of the child's birth in 7 cases that were not all originally diagnosed as autistic, but fulfilling the four diagnostic criteria formulated by Rutter (1978). Recently, Finnegan and Quarrington (1979), in a Canadian study of 23 autistic children, found 47.8% of the mothers to be in the age range 30-39 compared with 30.9% in the general population.

METHOD

Subjects

In a continuing total population study concerning childhood psychosis in the region of Göteborg, 39 children born in the years 1961 through 1973 were diagnosed as psychotic. By the end of 1978 there lived in the region nearly 99,000 children born in the years mentioned. This means that 3.9 in every 10,000 children suffered from some kind of psychosis. Twenty of the 39 children fulfilled Rutter's four diagnostic criteria for infantile autism—onset before 30 months, severe disturbance of social relationships, impaired speech-language, and "insistence on sameness" (Rutter, 1978). This suggests that an estimated 2 children in every 10,000 had infantile autism. This figure corresponds to that found by Lotter (cited by Wing, 1966) and Brask (1967).

There is an excess of boys in this group, as reported in other studies (Werry, 1972), with three boys for every girl. Four children (20%) were in the normal or near-normal IQ range, 12 (60%) had an IQ of 50-70, and the rest (20%) could not be reliably tested (IQ probably less than 50).

Procedure

Medical records of all the children diagnosed as autistic were collected. Maternal age at the time of the child's birth was noted. Corresponding figures for mean maternal age in the general population were obtained for each relevant year from the Swedish Central Bureau of Statistics. Maternal age at the time of delivery of each autistic child was compared with that of the general population.

The number of autistic children born to mothers in different age groups was compared with the total number of births to mothers of comparable age. This latter information was obtained from the county administration. The age of the fathers at the time of birth of the autistic