Early Identification of Autism

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This study was carried out to determine the nature and timing of parents' initial concerns and their subsequent help seeking behavior, so as to suggest ways to facilitate early identification of autism. The introductory part of the Autism Diagnostic Interview-Revised was used in a survey to elicit relevant information from parents of autistic children. Delayed/deviant speech and language development was the commonest early concern of parents. The mean age of parental recognition of any problem was 23.4 months. The mean time lag from first recognition of the problem to seeking professional help was 4 months and to diagnosis, 32 months. In 68% of cases, the first professional consulted was a child specialist.

Autism is a severe developmental disorder characterised by marked impairment of reciprocal social interaction, language and communication and repetitive behaviour. It is recognised that autism is an important problem in children in India and there is need for more research in this field(1,2). Some pertinent research issues are, identifying autism early and the role of the pediatrician in this process. The answers to these questions are important because there are no 'cures' for autism but early diagnosis and early intervention can improve long term outcome of autistic children(3,4).

METHODS

A survey was conducted in selected special schools and clinics in West Bengal among parents of children (0-18 years) diagnosed with autism. Written and verbal information was given to parents who gave informed written consent for inclusion of their children in the study. Detailed medical and developmental history of all children in the study was taken, focussing on autistic symptomatology and evolution of autistic behavior including any history of developmental regression.

A significant number (*n*=62) of children in the study had previously been diagnosed with autism in one of the National multidisciplinary centres, either at the National Institute of Mental Health and Neurosciences in Bangalore or the Christian Medical College at Vellore. Results of these assessments were studied. For the rest of the children, further direct observation was carried out and the teachers consulted about the behavior of the children. Diagnosis of autism was made in both groups according to DSM IV criteria(5). The introductory part of the Autism Diagnostic Interview (revised)(6), was used with parents to elicit information about the age at which parents first noticed any abnormality in their child's development, the nature of these concerns, the age at which parents first sought advice, who they sought advice from, etc. We also sought additional information relevant to the study.

A total of 152 sets of parents of children with autism were interviewed. Of these, 11 cases were excluded because of incomplete interview (2), non-fulfilment of age criteria (1), and non-fulfilment of DSM IV diagnostic criteria for autism spectrum disorder (8). There were 141 children who were

considered to be within the autism spectrum. Statistical analysis of results using a multivariate general linear model, retaining a *P*-value of 0.05 as level of significance, was carried out. Post-hoc Bonferroni tests and *t* tests were used to further investigate significant results.

RESULTS

The main features of the children and families are given in *Table* **I**. Mean age of the children was 8.9 years (SD 3.4). The cause of parents' first concern in 57% of cases was absence, significant delay or oddity in their child's speech and language development. In a further 26% of cases, speech problem was the second most important concern. Thus, for 83% of parents, problem in their child's speech and language development was the commonest concern which made them think that there was something not quite right about their child's progress and made them seek help. Various medical concerns, when present, were of earlier onset but they were non-specific. Other initial concerns included non-specific behavioral difficulties (sleep problems, high level of activity, etc.) in 7%, autistic behavior in 5.6%, abnormal socio-emotional response in 10% and, other medical

TABLE I CHARACTERISTICS OF THE STUDY POPULATION (*N*=141)

Characteristic	Number (%)
Male	111 (78.7)
Children with epilepsy	29 (21.0)
Overall language level of child*	
Verbal	69 (49.6)
Non verbal	70 (50.3)
Mother's education level	
University graduate	101 (72.6)
Higher secondary school level	23 (16.5)
Secondary school level	10 (7.0)
School level	5 (4.0)
Religious background of family	
Hindu	138 (98.0)
Christian	2 (1.4)
Muslim	1 (0.7)

No data on 2 children

problems (e.g., seizures) or delayed development (other than speech) in 19% of children.

The mean age of first concern was at 23.4 months (SD 11.3). Time lag from first concern to seeking help was 4 months (mean age 27.7 mo, SD 11.9). There was a further gap of 27.5 months to eventual diagnosis of autism (mean age 55.2 mo, SD 25.6). In 68% of cases, concerned parents first turned to the pediatrician for help and advice. Statistical analysis revealed a significant effect due to first concern reported, for age of concern ($P<0.005$), and for age of consultation ($P<0.005$). Post-hoc Bonferroni tests showed a significant effect both for age of first concern (12.88 months *vs* 26.50 months, $P<0.005$) and age of consultation (15.96 months *vs* 31.04 months, $P<0.005$), respectively for children showing medical problems compared to other children.

DISCUSSION

The study showed a significant delay of 32 months between parents' first recognition of a problem in their child's development and an eventual diagnosis of autism. This is a valuable time and a window of opportunity for early intervention, which is lost by the child and the family. Our study also showed that the pediatrician has an important role in any effort to minimise this delay, as in majority of the cases, parents first approached the pediatrician with the problem.

Delay and/or deviance of speech and language development were the commonest presentations of children with autism. This is in consonance with findings from European and American studies[7,8]. However, speech delay is also common in young children who are not autistic[9]. The important difference is that in cases of autism, speech delay is always associated with other indications of difficulty in social relatedness, peer interaction, play, repetitive behaviours, and also in non-verbal communication, such as gesture or eye-contact[10]. These behaviors may be subtle and may not be immediately apparent in a brief clinic visit and need to be specifically enquired into.

A limitation of the study is that the sample is highly skewed towards the more affluent social group as indexed by the distribution of maternal

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WHAT THIS STUDY ADDS?

- The pediatrican is the first professional approached by caregivers of children with autism and delayed/deviant speech is the commonest presentation.

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education level (*Table* **I**). However, this may have more to do with lesser awareness, access and affordability of diagnostic services to the poorer, less educated section of the community, rather than differential incidence of autism in different strata of society.

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