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Autism spectrum disorders Part I

This is the first in a series of three articles on Autism spectrum disorders

This is a condition associated with brain development which impacts how a person perceives and socializes with others. Therefore it causes problems in social interactions, behaviour, communication and language. There will be limited, monotonous and repetitive patterns of behaviour. This will be unique to the individual. As there is a wide range of symptoms with different grades of severity as autism, Asperger's syndrome, childhood disintegrative disorder and an unspecified form of pervasive developmental disorder also come under this the term autism spectrum disorder is used.

Autism spectrum disorder begins in early childhood. It causes problems working in society. The symptoms are seen within the first year of life. A small number of children appear to develop normally in the first year, and then go through a period of regression between 18 and 24 months of age when they develop autism symptoms. The intellectual functions of ASD persons vary from profound impairment to superior levels.
While there is no cure for autism spectrum disorder, intensive, early treatment can make a big difference in the lives of many children. Co-occurring conditions such as epilepsy, depression, anxiety and attention deficiency hyperactivity disorder (ADHD) are often present in individuals with ASD.

Historical facts

Leo Kanner first described specific patterns of abnormal behaviour in 1943 as Kanner syndrome or 'early infantile autism' in a paper published by him. There was no estimate of the possible number affected by it but was stated as a rare condition. In 1966 almost 20 years after Victor Lotter published regarding an epidemiological study among children with the design described by Kanner to have an overall prevalence rate of 4.5 per 10,000 children in Middlesex.

Lorna Wing and Judith Gould examined the prevalence of autism among children with special needs in 1979 as defined by Leo Kanner in the former London Borough of Camberwell. They found the prevalence in those with IQ under 70 nearly 5 per 10,000 per syndrome which was similar to the rate of Lotter. Wing and Gould did identify a larger group of children (about 15 per 10,000) who had impairments of social interaction, communication and imagination and they referred to as the 'triad' of impairments. They also did have a repetitive stereotyped pattern of activities. These children were not compatible with the full picture of early childhood autism (or typical autism) as described by Kanner. They were identified as being within the broader 'autism spectrum'.

In 1944 Hans Asperger published in Vienna regarding children with many similarities to Kanner autism but with abilities including grammatical language, in the average or superior range termed as "Asperger Syndrome". There are ongoing arguments regarding the precise relationship between Asperger and Kanner syndromes. Beyond argument, the triad of impairments of social interaction, communication and imagination and a narrow, repetitive pattern of activities have been in common.

Stephan Ehlers and Christopher Gillberg published the results in 1993 of a further study commissioned in Gothenburg. They examined children in mainstream schools to find the prevalence of Asperger syndrome and other autism profiles in children with an IQ of 70 or above. They calculated a rate of 36 per 10,000 definitely having Asperger

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syndrome and another 35 per 10,000 for those with social impairments. The latter group too certainly belonged to the autism spectrum. Having social and/or educational problems were identified by their teachers but the nature and the depth of their difficulties were not perceived by the teachers prior to the study.

Sula Wolff studied children for over 30 years in Edinburgh. The study was mainly focused on children of average or high ability who were impaired in their social interaction but who did not have the full picture of the triad of impairments. In 1995 in the book, she emphasizes that the clinical picture overlaps with Asperger syndrome to a great extent. These children symbolize the most sophisticated and most competent end of the autism spectrum. The majority become independent as adults, many marry and some exhibit phenomenal gifts but retain the bizarre features of social interactions.

The survey done in 2005 by the Office of National Statistics of the mental health of children and young people in Great Britain found a prevalence rate of 0.9% for autism, which was not differentiated as autism, Asperger syndrome or other profiles on the autism spectrum. The study report published by Gillian Baird and her colleagues in 2006 of a prevalence study which surveyed a population of children aged 9-10 years in the South Thames region. ICD-10 was used for the diagnosis which broadcasted the following results. The prevalence rate of 38.9 in 10,000 for 'childhood autism', and 77.2 in 10,000 for other conditions on the autism spectrum which demonstrated an overall figure of 116 in 10,000.
In 2013 the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, DSM-5 states, "Individuals with a well-established DSM-IV diagnoses of autistic disorder, Asperger's disorder or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder."

Epidemiology

It is predicted that 1 in 160 children worldwide has an ASD. This estimate is an average figure. Different studies report various prevalence across studies. The prevalence of ASD in many low- and middle-income countries is so far unknown.

Boys are four times more likely to be diagnosed with autism than girls. Majority of children are still being diagnosed after age 4, though can be reliably diagnosed as early as age 2. This affects all ethnic and socioeconomic groups. Thirty-one per cent of children with ASD have an intellectual disability (intelligence quotient [IQ] <70 while 25% are in the borderline range (IQ 71–85), and 44% have IQ scores in the average to above average range IQ >85.

The prevalence of ASD appears to be increasing globally based on epidemiological studies conducted over the past 50 years. The possible clarification for this probable increase being upgraded awareness, inflation of diag-

nostic criteria, better diagnostic tools and enhanced reporting

Characteristics of Autism Spectrum Disorders

Autism varies from person to person in severity and sequence of symptoms. There is a great range of capabilities and typical features seen in children with an autism spectrum disorder. Therefore the children differ from one another with no two children appear or behave the same way. Symptoms can be in the territory of mild to severe and often change over time.

Compiled by-

Dr.T.D.Haputhanthri

Epidemiology Unit, Ministry of Health.

Table 1: Selected notifiable diseases reported by Medical Officers of Health 01st – 07th June 2019 (23rd Week)

RDHS Division	Dengue Fever A	Dengue Fever B	Dysentery A	Dysentery B	Encephalitis A	Encephalitis B	Enteric Fever A	Enteric Fever B	Food Poisoning A	Food Poisoning B	Leptospirosis A	Leptospirosis B	Typhus Fever A	Typhus Fever B	Viral Hepatitis A	Viral Hepatitis B	Human Rabies A	Human Rabies B	Chickenpox A	Chickenpox B	Meningitis A	Meningitis B	Leishmaniasis A	Leishmaniasis B	WRCD T*	WRCD C**
Colombo	233	4510	1	25	1	4	2	10	1	27	4	93	0	7	0	5	0	0	10	249	0	27	0	3	48	100
Gampaha	141	2820	3	16	2	3	0	3	0	15	3	53	0	2	0	3	0	1	4	222	0	12	0	73	50	98
Kalutara	99	1479	0	36	1	5	0	10	3	38	8	255	0	4	0	4	0	0	8	373	2	59	0	3	62	95
Kandy	64	1300	2	48	1	8	0	1	1	11	2	39	3	46	0	2	0	1	6	149	0	32	6	23	63	100
Matale	8	229	1	15	0	3	0	0	0	4	0	29	0	4	0	3	1	1	1	46	0	3	2	117	55	100
NuwaraEliya	5	86	15	68	0	1	0	4	0	1	3	26	6	43	0	4	0	0	5	50	1	25	0	0	26	100
Galle	278	1645	0	26	0	4	0	3	1	5	6	182	1	24	1	5	0	0	6	221	1	32	0	2	61	99
Hambantota	20	521	1	4	1	2	0	0	0	5	5	58	0	71	0	2	0	1	3	195	1	20	11	388	74	100
Matara	42	731	0	8	0	4	0	1	2	8	12	163	0	19	2	15	0	0	10	163	1	6	4	257	59	100
Jaffna	14	1920	8	97	2	8	1	16	10	31	0	22	0	258	0	3	0	0	5	155	2	12	0	0	26	93
Kilinochchi	4	100	1	9	0	1	0	9	0	0	1	18	1	24	0	1	0	0	0	3	0	3	0	7	49	100
Mannar	1	73	0	2	0	1	0	7	0	1	0	1	0	8	0	0	0	0	0	0	0	0	0	1	50	100
Vavuniya	1	174	0	6	0	9	0	19	0	3	0	41	0	4	0	0	0	0	0	53	0	8	0	1	56	99
Mullaitivu	0	102	0	6	0	0	0	7	0	2	0	17	0	6	0	0	0	0	0	2	0	5	0	4	28	99
Batticaloa	22	855	4	52	0	2	0	11	0	4	0	29	0	1	0	1	0	1	5	150	0	11	0	0	52	100
Ampara	3	106	13	32	0	2	0	0	1	7	0	22	0	1	0	10	0	0	8	105	0	7	4	4	55	100
Trincomalee	24	687	0	9	0	4	0	0	0	14	0	7	0	3	0	2	0	0	8	124	0	5	0	1	28	100
Kurunegala	31	781	1	35	1	8	0	4	0	15	4	103	0	12	0	15	0	0	12	373	3	48	20	422	58	100
Puttalam	13	266	0	15	0	2	1	1	1	2	3	22	1	9	0	1	0	1	6	100	0	24	1	7	59	100
Anuradhapura	12	247	3	23	1	6	0	3	0	4	1	85	0	26	1	17	0	2	2	329	2	49	4	268	40	97
Polonnaruwa	9	136	1	14	0	2	0	1	0	0	3	48	0	3	0	15	0	0	9	208	0	12	6	138	61	100
Badulla	14	320	0	35	0	4	1	6	11	67	3	100	2	58	0	13	0	0	6	161	4	109	1	11	67	100
Monaragala	9	224	2	31	1	4	0	0	0	77	0	151	0	60	1	35	0	0	9	165	5	89	2	12	61	100
Ratnapura	78	1041	0	49	1	23	0	6	0	11	16	391	0	19	0	16	0	4	1	218	0	80	2	80	44	99
Kegalle	36	597	0	23	0	11	0	1	0	22	5	95	2	24	2	77	0	0	4	261	2	22	1	20	64	100
Kalmune	11	486	0	21	0	0	0	1	0	9	0	20	0	2	0	1	0	0	2	131	0	14	0	0	63	100
SRILANKA	**1172**	**21436**	**56**	**705**	**1**	**117**	**4**	**124**	**31**	**383**	**79**	**2070**	**16**	**738**	**5**	**249**	**0**	**11**	**130**	**4206**	**24**	**714**	**60**	**1842**	**54**	**99**

Source: **Weekly Returns of Communicable Diseases (WRCD).**

T=Timeliness refers to returns received on or before 07th June , 2019 Total number of reporting units 353 Number of reporting units data provided for the current week: 336 **C***-Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP   01st – 07th June 2019 (23rd Week)

Disease	No. of Cases by Province									Number of cases during current week in 2019	Number of cases during same week in 2018	Total number of cases to date in 2019	Total number of cases to date in 2018	Difference between the number of cases to date in 2019 & 2018
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	01	01	00	00	00	03	04	38	27	40.7 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	00	00	00	00	01	00	01	02	07	170	171	-0.5 %
Measles	00	05	03	01	00	00	01	00	00	10	02	153	58	163.7 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	04	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	08	11	- 27.2 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese En-cephalitis	00	00	00	00	00	00	00	00	00	00	00	09	15	- 40 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	03	31	27	14.8 %
Tuberculosis	65	00	09	11	16	27	00	07	09	144	160	3756	3731	0.6 %

Key to Table 1 & 2

Provinces: **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

RDHS Divisions: **CB**: Colombo, **GM**: Gampaha, **KL**: Kalutara, **KD**: Kandy, **ML**: Matale, **NE**: Nuwara Eliya, **GL**: Galle, **HB**: Hambantota, **MT**: Matara, **JF**: Jaffna,
KN: Killinochchi, **MN**: Mannar, **VA**: Vavuniya, **MU**: Mullaitivu, **BT**: Batticaloa, **AM**: Ampara, **TR**: Trincomalee, **KM**: Kalmunai, **KR**: Kurunegala, **PU**: Puttalam,
AP: Anuradhapura, **PO**: Polonnaruwa, **BD**: Badulla, **MO**: Moneragala, **RP**: Ratnapura, **KG**: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS =**Congenital Rubella Syndrome

NA = Not Available

Dengue Prevention and Control Health Messages
Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

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Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to **chepid@sltnet.lk**. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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