WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health, Nutrition & Indigenous Medicine

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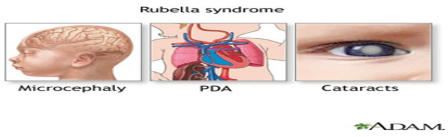
Congenital rubella syndrome (CRS) Part II

Signs and Symptoms of Congenital Rubella Syndrome

The classical triad

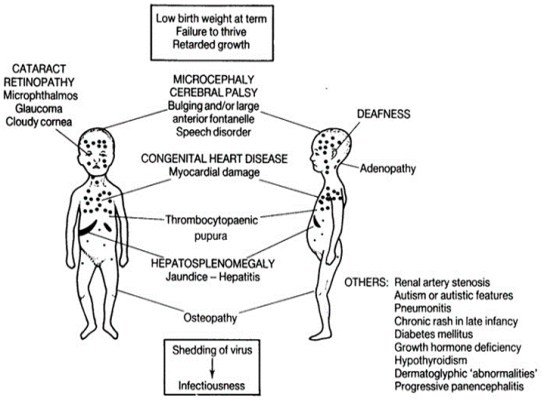
- Heart problems
- Eye problems, including cataracts and glaucoma
- Deafness



Other symptoms as

- Intellectual disabilities
- Growth retardation
- Low birth weight
- Developmental delays
- Learning disabilities
- Diabetes
- Enlarged liver and spleen
- Skin lesions
- Bleeding

Long-Term Approach of Children with CRS



The progress of a child born with congenital rubella syndrome depends on the severity of the birth defects. The heart problems could be corrected but the nervous system damage is usually irreversible. Thus prevention is important by vaccinating with MMR. The specific symptoms of the baby can be treated accordingly.

Road Map of Elimination of Congenital Rubella in Sri Lanka

As the country along with the South East Asia Region countries is planning to eliminate Measles and Rubella/CRS (Congenital Rubella Syndrome) and achieve the elimination states by 2020 it is worthy to know how it is achieved.

Policy of Vaccination

Due to the evident CRS epidemics in 1994-1995 in Sri Lanka the national policy of vaccination of women in the reproductive age group (16-44 years) has emerged. Therefore the rubella vaccine was included in the National Expanded Programme on Immunization since 1996. Though measles vaccine was given routinely as a monovalent vaccine since 1984, the outbreak in 1999-2000 showcased the importance of a second dose. This gave an opportunity to introduce the measles-rubella (MR) vaccine to all children at 3 years through the national EPI from 2001.

The measles-mumps-rubella (MMR) vaccine was introduced to the EPI schedule in 2011. The monovalent measles vaccine is given at 9 months and the MR vaccine given at 3 years were replaced by the MMR vaccine. The children were vaccinated at 1 year and 3 years initially which was changed later in 2015 to be given at 9 months and 3 years.

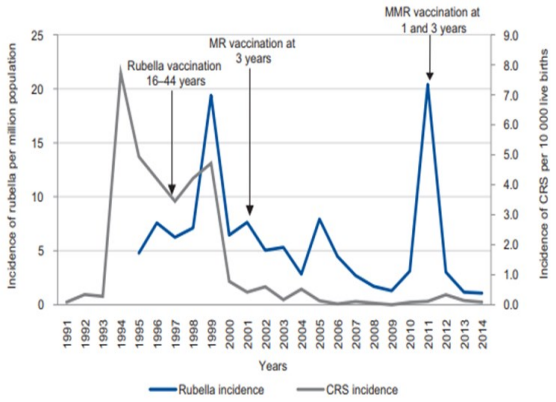
In view of the developing population immunity to rubella, supplementary immunization was given through catch up vaccination campaigns in 2003 among 10-15-year-old individuals(coverage 95%) and among the 16-20-year-old individuals in 2004(coverage 72%).

School-based adolescent rubella vaccination

Contents **Page**

was given to 14-year-olds since 2002 for girls was introduced to boys in 2004 which was continued strategically till 2012. It was stopped when all children receiving MR vaccine at 3 years in 2001 reached 14 years.

At community level, the rubella vaccination status is inquired since 2000 at the time of entering couples to the "Eligible Couple register". This too helps to identify unvaccinated individuals and to get them vaccinated.



Surveillance of Rubella/Congenital Rubella

Antibody testing for rubella was started during the 1990s. After the 1990 specific rubella immunoglobulin (IgM) testing and follow-up of individuals with elevated titres, was established at the Virology Laboratory. During the 1994–1995 period an increased number of CRS cases were detected at the laboratory and by clinicians. This was mainly due to an outbreak of rubella. The College of Paediatricians took the lead in a special survey (combined retrospective and prospective) which identified 275 clinical cases of CRS (103 were laboratory confirmed) in 1994 and 212 CRS cases for 1995 which included 169 cases in the first 4 months.

Since 1996 rubella and CRS have been identified as notifiable diseases by the Government of Sri Lanka. Notification was made mandatory since then. Therefore a routine system is being used to notify all suspected cases of rubella and CRS, from all health-care institutions. The patient`s residential area Medical Officer of Health who is responsible for community-level health care of people is being notified through this routine system of all suspected cases. The cases are then notified to the Regional Epidemiologist (RE) and the Epidemiology unit weekly.

In the case surveillance, CRS specific case definition is used in identifying the cases. The case definition is as "maternal history of rubella infection and/or with signs and symptoms from any of cataract/congenital glaucoma, pigmentary retinopathy, congenital heart disease, loss of hearing or purpura, splenomegaly, jaundice, meningoencephalitis, microcephaly, mental retardation, radiolucent bone disease or laboratory rubella IgM-positive result". The cases which fall under the definition is notified and a detailed case-based investigation is being carried out.

Notification regarding rubella and CRS from the private health sector occurs through the field-level Medical Officers of Health. During the house to house domiciliary care, the field level Public Health Midwives too identify suspected cases of rubella and CRS which is being reported to the Medical Officer of Health in the area for further investigation, reporting, for preventive measures and follow up. Case confirmation in a laboratory for rubella IgM is expected in Sri Lanka for suspected cases for rubella and CRS.

Since 2004 active surveillance and zero reporting has been added which include health care institutions with medical specialist available. Thus it was done due to nearly 100% births occurring in health institutions with more than 90% of them taking place in institutions with specialists.

In case of maternal history suggestive of rubella exposure or children born with congenital abnormalities, blood sample is collected from patients in obstetric wards, for TORCH (Toxoplasma, Rubella, Cytomegalovirus and Herpes) screening. Babies positive for rubella IgM tested at MRI are reported as suspected cases and monitored for rising titres.

Observations

National Communicable Disease Surveillance Programme of the Epidemiology Unit has regularly monitored and maintained completeness of reporting at around 90–100% on rubella and CRS to be for more than a decade. The surveillance information has shown that the incidence of CRS in the country to be maintained at below 1 per 100 000 live births during the last 15 years.

The coverage of rubella protection has shown a gradual increase over the last few years reported, from 93% in 2008 to 97% in 2013. The case-based investigation of all suspected cases of CRS at institutional and field level has been enhanced.

The CRS control and certification has been achieved by Sri Lanka in 2018. RCVs (MR/MMR) national immunization coverage at the age of 3 years has been above 95% since 2010.

Challenges

Although so much has been done to completely eliminate CRS in the country there are challenges and obstacles which needs to be overcome. Recognition of population-level immunity by sero-surveillance and population-susceptibility profiles is essential in achieving successes. Due to the high coverage of rubella vaccination community transmission of rubella disease is expected to be at a low level. The potential transmission in situations of adult male gathering and international travel is possible. Continued attention of surveillance and identification of cases early would remain as a challenge with low incidence. Maintaining the achieved high vaccination coverage with low disease incidence would also be a possible challenge in the future.

Compiled by – Dr.T.D.Haputhanthri , Epidemiology unit

Sources

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Norman McAlister Gregg and the Discovery of Congenital Rubella Syndrome - https://norkinvirology.wordpress.com/2015/03/04/norman-mcalister-gregg-and-the-discovery-of-congenital-rubella-syndrome/WHO South-East Asia Journal of Public Health | July–December 2015 -Impact of rubella vaccination on elimination of congenital rubella syndrome in Sri Lanka: progress and challenges

Table 1: Selected notifiable diseases reported by Medical Officers of Health 18th – 24th May 2019 (21st Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	152	4066	1	21	0	3	0	7	4	26	1	83	0	7	0	5	0	0	10	229	0	25	1	3	**48**	**100**
Gampaha	32	2510	0	10	0	1	0	3	0	15	3	49	0	2	0	1	0	1	3	199	0	11	1	58	**51**	**97**
Kalutara	63	1288	2	36	0	4	2	9	0	31	6	238	1	4	0	4	0	0	16	349	1	56	0	3	**62**	**93**
Kandy	60	1178	5	42	0	7	0	1	0	10	1	32	2	43	0	2	0	1	4	136	3	30	0	17	**63**	**100**
Matale	7	219	0	14	0	3	0	0	2	4	2	29	0	4	0	3	0	1	3	45	0	3	0	113	**56**	**99**
NuwaraEliya	6	78	5	44	0	1	0	4	0	0	3	19	2	37	0	4	0	0	1	43	1	24	0	0	**25**	**100**
Galle	139	1020	0	26	0	4	0	3	0	4	15	162	1	22	0	4	0	0	8	203	1	31	0	2	**63**	**96**
Hambantota	21	477	0	3	0	1	0	0	0	5	6	51	0	70	0	1	0	1	9	187	1	18	4	355	**73**	**100**
Matara	25	654	1	6	0	4	0	1	0	6	14	136	1	18	2	12	0	0	8	148	1	5	3	248	**60**	**100**
Jaffna	32	1897	6	81	0	6	2	14	2	19	0	22	0	255	0	3	0	0	4	140	0	8	0	0	**26**	**93**
Kilinochchi	0	89	0	8	0	1	0	9	0	0	0	17	0	23	0	1	0	0	0	3	0	3	0	7	**49**	**100**
Mannar	0	71	0	2	0	1	0	7	0	1	0	1	0	8	0	0	0	0	0	0	0	0	0	1	**50**	**97**
Vavuniya	3	169	0	6	1	9	0	19	0	3	0	39	0	4	0	0	0	0	3	53	0	8	0	1	**55**	**99**
Mullaitivu	1	92	0	6	0	0	1	5	0	2	0	11	0	6	0	0	0	0	1	1	0	2	2	4	**33**	**84**
Batticaloa	13	807	1	46	0	2	0	10	0	4	1	27	0	1	0	0	0	1	12	137	0	10	0	0	**52**	**100**
Ampara	3	101	2	14	0	2	0	0	0	4	2	21	0	1	0	9	0	0	7	94	0	6	0	4	**56**	**100**
Trincomalee	10	571	0	8	0	0	0	0	0	8	1	6	0	3	0	1	0	0	4	103	1	5	0	1	**37**	**80**
Kurunegala	28	718	2	31	1	7	0	4	0	14	5	96	1	12	0	13	0	0	11	346	4	41	15	387	**59**	**99**
Puttalam	5	246	0	14	0	2	0	1	0	1	2	19	0	8	0	1	0	0	2	91	0	24	0	5	**61**	**97**
Anuradhapura	7	223	0	16	0	5	0	3	0	3	1	82	0	24	0	14	0	1	9	314	0	45	9	246	**41**	**95**
Polonnaruwa	0	121	1	13	0	2	0	1	0	0	1	38	0	3	2	15	0	0	16	185	0	12	5	125	**61**	**99**
Badulla	4	293	4	33	1	4	0	5	0	56	3	86	2	51	0	13	0	0	5	147	6	98	0	10	**67**	**100**
Monaragala	4	205	1	29	0	3	0	0	0	77	4	146	3	58	0	34	0	0	7	151	2	80	0	10	**63**	**100**
Ratnapura	47	880	2	47	0	21	0	6	0	11	28	338	0	19	2	14	0	4	8	202	5	78	9	77	**45**	**99**
Kegalle	14	527	1	21	0	11	0	0	1	22	2	78	1	22	1	75	0	0	11	244	1	18	0	17	**65**	**100**
Kalmune	16	468	0	21	0	0	0	1	0	9	1	20	0	2	0	1	0	0	14	125	0	14	0	0	**63**	**100**
SRILANKA	**692**	**18968**	**34**	**598**	**3**	**104**	**5**	**113**	**9**	**335**	**10**	**1846**	**14**	**707**	**7**	**230**	**0**	**10**	**176**	**3875**	**27**	**655**	**49**	**1694**	**55**	**98**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 24th May , 2019 Total number of reporting units 353 Number of reporting units data provided for the current week: 304 C**-Completeness

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

Table 2: Vaccine-Preventable Diseases & AFP

18th – 24th May 2019 (21st 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*	00	00	00	00	00	00	00	00	00	00	01	35	22	59 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	01	00	01	00	01	00	00	02	02	06	06	160	155	3.2 %
Measles	00	04	09	00	00	00	00	00	00	13	00	127	54	135.1 %
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	01	00	07	11	- 36.3 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	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	04	29	21	38 %
Tuberculosis	17	40	02	11	32	33	00	17	04	156	70	3375	3242	4.1 %

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

Number of Malaria Cases Reported During the Month of May 2019,

05

All are Imported!!!

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