**26th October, 2016**

**Figure 1: Trend of rubella cases, congenital rubella syndrome (CRS), first and second dose of rubella-containing vaccine (RCV1, RCV2), Oman, 1985-2015**

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**Figure 2: Congenital rubella syndrome (CRS) initial assessment form for general examination, Oman, 2015**

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**Figure 3: Congenital rubella syndrome (CRS) follow-up form for ocular and neurological manifestation, Oman, 2015**

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**Figure 4: Congenital rubella syndrome (CRS) examination and data collection form for hearing and speech impairment, Oman, 2015**

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**Figure 5. Congenital rubella syndrome (CRS) surveillance, Oman, 1980-2015**

**Source of CRS information are:**

* **National communicable disease surveillance**
* **Infant death registry**
* **Congenital anomalies and genetic disorders**
* **Eye and ENT diseases monthly report.**
* **Deafness monthly report**
* **Inpatient and outpatient monthly report**
* **Handicap centers.**

**104 CRS Suspected patients** reported

**85 (82%) CRS patients met the case definition**

**61 (72%) clinically confirmed CRS. All CRS patients were born during rubella outbreak period 1987- 1996**

**23 (27%) laboratory confirmed CRS**

**1 (1%) congenital rubella infection**

**46 (54%) CRS patients were evaluable and followed- up**

**(22, clinically confirmed; 23, laboratory confirmed; 1, congenital rubella infection)**

**20 (24%) Lost to follow-up**

**19 (22) Total death**

**Table 1. Congenital rubella syndrome (CRS) clinical manifestations identified upon diagnosis among evaluable patients, Oman, 1980-2015**

|  |  |
| --- | --- |
| **Type of birth defect** | **Early clinical manifestations, incidence among evaluable CRS patients, No. (%)** |
| Cardiovascular defect | **18 (39)** |
| Congenital ocular defect | **29 (63)** |
| Congenital cataract or glaucoma | **19 (41)** |
| Congenital hearing impairment | **27 (59)** |
| Microphthalmia | **7 (15)** |
| Neurological defects | **25 (54)** |
| Microcephaly | **24 (52)** |
| Low birth weight(≤ 2.5Kg) | **11 (24)** |
| Hepatosplenomegaly | **3 (6)** |
| Purpura | **-** |
| Hypospadias\* | **1 (2)** |
| Unknown | **-** |
| **Total evaluable CRS patients** | **46** |

* **Not included in CRS case definition**

**Table 2a. Causes of visual loss among evaluable congenital rubella syndrome patients upon diagnosis, Oman, 1980-2015**

|  |  |
| --- | --- |
| **Type of ocular lost** | **No. (%)** |
| **Ocular Cataract** | **14 (48)** |
| Ocular cataracts one eye | 8 (57) |
| Ocular cataract both eyes | 6 (43) |
| **Ocular glaucoma** | **5 ( 29)** |
| Ocular glaucoma one eye | 1(20) |
| Ocular glaucoma both eyes | 4 (80) |
| **Retinitis** | **16 (55)** |
| **Microphthalmos** | **6 (21)** |
| **Aphakia** | **3(10)** |
| **Corneal hydrops**  | **1 (3)** |
| **Hypermetropia** | **1(3)** |
| **Keratoconus**  | **1 (3)** |
| **Absorbed lens**  | **1(3)** |
| **Eye surgery** |  |
| Total surgeries | **20/60 (30)** |
| **Total ocular defects** | **29** |

**Table 2b. Causes of hearing lost among evaluable congenital rubella syndrome patients upon diagnosis, Oman, 1980-2015**

|  |  |
| --- | --- |
| **Type of hearing lost** | **No. (%)** |
| **Reporting hearing lost both ears** | **22 (81)** |
| **Sensorineural hearing impairment** | **21 (78)** |
| **Conductive hearing impairment** | **1 (4)** |
| **Mixed hearing impairment** | **1 (4)** |
| **No ocular anomaly** | **4 (15)** |
| **Speech impairment delay** | **20 (74)** |
| **Use hearing device** | **3 (11)** |
| **Unable to test for hearing loss** | **3 (11)** |
| **Total hearing lost** | **27** |

**Table 2c. Cardiovascular system defects among evaluable congenital rubella syndrome patients upon diagnosis, Oman, 1980-2015**

|  |  |
| --- | --- |
| **Defect** | **No. (%)** |
| **Patent ductus arteriosus (PDA)** | 12 (66) |
| **Ventricular septal defect (VSD)** | 5 (28) |
| **Organic systolic murmur** | 3 (17) |
| **Pulmonary stenosis** | 1 (5) |
| **Pulmonary atresia**  | 1 (5) |
| **Total**  | 18 |

**Table 2d. Neurological developmental defects among evaluable congenital rubella syndrome patients upon diagnosis, Oman, 1980-2015**

|  |  |
| --- | --- |
| **Defect** | **No. (%)** |
| **Normal intelligence**  | **23 (50)** |
| **Microcephaly** | **24 (52)** |
| **Mental retardation** | **22(48)** |
| **Total CRS cases** | **46** |

**Figure 6. Survival curse of all CRS cases, Oman, 1980-2015**