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|---|---|---|---|
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| **AGE/ GENDER** | : 20 YRS/MALE | **PATIENT ID** | : 1618752 |
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| **CLIENT ADDRESS** | : 6349/1, NICHOLSON ROAD, AMBALA CANTT | | |

| Test Name | Value | Unit | Biological Reference interval |
|---|---|---|---|

## IMMUNOPATHOLOGY/SEROLOGY

### MEASLES (RUBEOLA) ANTIBODY IgG

| | | | |
|---|---|---|---|
| **MEASLES (RUBEOLA) ANTIBODY IgG** | **1.61$^{H}$** | **AI** | **< 0.90** |

***INTERPRETATION:***

| RESULT IN AI | REMARKS |
|---|---|
| < 0.90 | NEGATIVE |
| 0.90 – 1.10 | EQUIVOCAL |
| >1.10 | POSITIVE |

**COMMENTS:**

1.Measles is a highly contagious viral disease clinically characterized by fever, cough and rash.
2.It's expression in younger or undernourished children leads to more complications.
3.Presence of IgM antibody or a 4 fold increase in IgG titre is consistent with recent infection.
4.This test is also used to check immune status post vaccination.
5.The presence of IgG antibody to measles virus is indicative of previous exposure or vaccination.
6.In individuals with acute measles a significant increase in measles IgM antibody level is indicative of recent infection.
7.IgM antibodies to measles virus are often detectable with onset of the rash and typically presist for 4 weeks.

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| Test Name | Value | Unit | Biological Reference interval |
|---|---|---|---|

## MUMPS ANTIBODY IgG

| | | | |
|---|---|---|---|
| **MUMPS ANTIBODY IgG**<br>***by ELISA (ENZYME LINKED IMMUNOASSAY)*** | **3.18$^{H}$** | **AI** | **NEGATIVE: < 0.90**<br>**EQUIVOCAL: 0.90 - 1.10**<br>**POSITIVE: > 1.10** |

***INTERPETATION:***

| RESULT IN AI | REMARKS |
|---|---|
| < 0.90 | NEGATIVE |
| 0.90 – 1.10 | EQUIVOCAL |
| >1.10 | POSITIVE |

**COMMENTS:**

1.Mumps is an acute generalized viral infection that occurs primarily in school-age children and adolescents.
2.The mumps virus is a member of the paramyxoviridae family.The most prominent manifestation of this disease is non suppurative swelling and tenderness of the salivary glands,with one or both parotid glands involved in most cases.
3.The disease is benign and self limited, with one third of the individuals having subclinical infection. Meningitis and epididymoorchitis represent the 2 most important of the less frequent manifestations.
4.Mumps in post pubertal individuals usually results in a more severe disease with common extrasalivary gland involvement.
5.The presence of Mumps-specific IgG is indicative of previous infection or vaccination, whereas the presence of Mumps-specific IgM is strong evidence of recent or active infection.
6.A four-fold or greater increase in mumps antibody titre, between acute and convalescent sera taken 1-3 weeks apart, is considered diagnostic for mumps.
7.Hence paired testing is recommended.
8.Past overt and subclinical infections greatly contribute to high seroprevalence of various community-related infectious diseases in the general Indian population.
9.Hence, all results must be interpreted in the context of the total clinical history and supplementary findings of other investigative procedures.
10.Infection with Mumps virus causes fever, head ache and swelling and tendrness of the salivray glands.
11.Most adults born before 1957 have been infected naturally and are probably immune.
12.Mumps can occur in unimmunized children or adolscents and young adults who graduated from school prior to the law requruiring mumps immunization .
13.About 1/3 of people have no symptom

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| Test Name | Value | Unit | Biological Reference interval |
|---|---|---|---|

## RUBELLA ANTIBODIES IgG

| | | | |
|---|---|---|---|
| **RUBELLA ANTIBODIES IgG** | **5.62$^{H}$** | **IU/mL** | **NEGATIVE: < 2.0**<br>**POSITIVE: > 2.0** |

***INTERPRETATION:***

Rubella virus, the only member of rubivirus genus, causes rubella (also known as german measles), an acute exanthematous infection of children and adults. The clinical illnss is characterized by rash, fever and lymphadenopathy and can resemble a mild case of measles. The virus also cause arthralgias and occasional encephalitis. Infection is particularly disastrous if contracted during the first 4 months of pregnancy. If not immunologically protected, women infected during pregnancy run a high risk of embryo-foetal damage. Congenital Rubella causes a wide range of severe defects in foetus, including cataract, deafness, hepatosplenomegaly, psychomotor retardation, bone alterations, cardiopathies, neuropathies and diabetes.

**TEST UTILITY:**

1. IgM antibodies become detectable in a few days after the onset of signs and symptoms and reach peak level in 7 – 10 days. These antibodies persist, but rapidly diminishes in concentration over the next 4 – 5 weeks until the antibody is no longer clinically detectable. While the presence of IgM antibodies suggests current or recent infection, low levels of IgM antibodies may occasionally persist for more than 12 months post-infection or immunization. The presence of IgM antibodies in a new born indicates that the bay was infected during pregnancy because the mother IgM antibodies do not pass to the baby through umbilical cord.
2. Rubella IgG antibody can be formed following rubella infection or after rubella vaccination. A reactive result is consistent with immune status to rubella virus. The presence of IgG antibodies, but not IgM antibodies, in a newborn means that the mothers IgG antibodies have passed to the baby in utero and these antibodies may protect the infant from rubella infection during the initial six months of life.

**LIMITATIONS:**

1. Rubella IgM test results are intended as an aid to the diagnose of active or recent infection. They should however, be interpreted in conjugation with other clinical findings and diagnostic procedures
2. The antibody titre of a single serum specimen cannot be used to determine recent infection. Specimens obtained too early, or too late, during the course of infection, may not demonstrate detectable levels of IgM antibody. Samples collected too early may not have detectable levels of IgG. Paired samples (acute & convalescent) should be collected and tested concurrently to demonstrate seroconversation.
3. A positive Rubella IgM result may not always indicate a primary acute infection, as IgM has a tendency to persist, even at high levels, after primay infection. *FALSE POSITIVE RESULTS MAY ALSO OCCUR DUE TO RHEUMATOID FACTOR AND ANTI-NUCLEUR ANTIBODIES*. Hence, IgG avidity testing is recommended to differentiate between primay infection, IgM persistence and reactivation. IgG antibody results should be interpreted in conjugation with clinical evaluation and the and the results of other diagnostic procedures.

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| Test Name | Value | Unit | Biological Reference interval |
|---|---|---|---|

## VARICELLA ZOSTER VIRUS (HERPES ZOSTER) ANTIBODIES IgG

| | | | |
|---|---|---|---|
| **VARICELLA ZOSTER ANTIBODIES IgG**<br>*by ELISA (ENZYME LINKED IMMUNOASSAY)* | **1.86$^{H}$** | **U/mL** | **< 0.90** |

***INTERPRETATION:***

| VARICELLA ZOSTER ANTIBODIES IgG | | |
|---|---|---|
| NEGATIVE | U/mL | <0.90 |
| EQUIVOCAL | U/mL | 0.90 - 1.10 |
| POSITIVE | U/mL | >1.10 |

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## TB GOLD (QUANTIFERON): INTERFERON GAMMA RELEASE ASSAY (IGRA)

| Test Name | Value | Unit | Biological Reference interval |
|---|---|---|---|
| TB GOLD - QUANTIFERON<br>*by ELISA (ENZYME LINKED IMMUNOASSAY)* | NEGATIVE (-ve) | | |

**TEST DETAILS (REFERENCE ONLY)**

| | | |
|---|---|---|
| IFN-GAMMA FROM NEGATIVE CONTROL VIAL (N)<br>*by ELISA (ENZYME LINKED IMMUNOASSAY)* | 1.455 | pg/mL |
| IFN-GAMMA FROM TB Ag CULTURE VIAL (T)<br>*by ELISA (ENZYME LINKED IMMUNOASSAY)* | 1.77 | pg/mL |
| IFN-GAMMA DIFFERENCE (T-N)<br>*by ELISA (ENZYME LINKED IMMUNOASSAY)* | 0.31 | pg/mL |
| (T-N/N) % VALUE<br>*by ELISA (ENZYME LINKED IMMUNOASSAY)* | 21.31 | % |
| **INTERPRETATION CRITERIA FOR IGRA** | (T-N) VALUE SHOULD BE >= 0.35 AND >= 25% OF NIL VALUE | |

***INTERPRETATION:***

| NIL (IU/ML) | T – N (TB Antigen minus NIL Tube) IU/mL | SATNDARD E RESULT | INTERPRETATION |
|---|---|---|---|
| <= 8.0 | < 0.35 | NEGATIVE | NOT Infected with *Mycobacterium tuberculosis* |
| | >= 0.35 and < 25 % of NIL VALUE | | |
| | >= 0.35 and >25 % of NIL VALUE | POSITIVE | Infected with *Mycobacterium tuberculosis*(active, latent or inapparent infection) |
| >8.0 | ANY VALUE | INTERMEDIATE | Cannot determine whether Mycobacterium tuberculosis infection/ Result are indeterminate for TB Antigen responsiveness Any |

**NOTE:**

*1. Diagnosing or excluding tuberculosis disease, and assessing the probability of LTBI, Requires a combination of epidemiological, historical, medical, and diagnostic findings that should be taken into account when interpreting ELISA Report results.*

*2. NEGATIVE TEST DOES NOT PRECLUDE THE POSSIBILITY OF MYCOBACTERIUM TUBERCULOSIS INFECTION/DISEASE*

*3. IGRA Test is approved as an in vitro diagnostic aid for detection of Mycobacterium tuberculosis infection (active disease and LTBI) and is intended for use in conjunction with risk assessment, radiography and other medical and diagnostic evaluations. The IGRA test does not differentiate between*

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| Test Name | Value | Unit | Biological Reference interval |
|---|---|---|---|

*active and latent TB so latent patient will also be picked by IGRA. IGRA cannot be used as standalone test to diagnose TB infection. IGRA test is not established for any prognostic use.*

3. The SD Biosensor TB Gold IGRA (Interferon Gamma Releasing Assay) test is whole blood test for detection of infection to Mycobacterium tuberculosis as occurs in active tuberculosis and latent tuberculosis infection (LTBI).If not detected and treated, LTBI may later develop into TB disease. This test measures the patient's immune reactivity to M. tuberculosis, the bacterium that causes TB. Blood samples are mixed with TB specific antigens and incubated for 20 to 24 hours. The antigens include ESAT-6 and CFP-10, proteins specific to tuberculosis complex. These antigens are not found in BCG strains or atypical Mycobacteria. If the patient is infected with M. tuberculosis, the patient's lymphocytes will recognize the antigens and release interferon –gamma in response .The TB Platinum test results are based on the amount of IFN –gamma that is released. Additional tests (such as chest radiograph) are needed to exclude TB disease and confirm the diagnosis of LTBI.

**METHOD:** Interferon Gamma Release Assay (IGRA);

**CAUTION:** Assay results should be interpreted only in the context of other laboratory finding and the total clinical status of the patient

*** End Of Report ***

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