Rheumatoid factor (RF) Testing by latex

Rheumatoid arthritis (RA) is a chronic inflammatory disease affecting primarily the joints and periarticular tissues. For many years it has been know that several abnormal proteins circulate in the blood of patients with RA. These proteins, because of their obvious correction with the disease, because know as Rheumatoid factor (RF). Research of these proteins has characterized them as usually being a group of IgM class immunoglobulin that interact with antigenic determinants on human IgG molecules. Rheumatoid factor is detected in 60-80% of cases of diagnosed rheumatoid arthritis.

Principle

Rheumatoid factor **(RF)** is an anti-antibody, which in –vitro, is detected by its ability to agglutinate latex particle coated with human IgG. RF in patient sample, if present will attach to the IgG coating the latex particle. Agglutination of the latex particles is a positive result indicating the presence of RF

Material of Rheumatoid factor test kit consist of

1. RF Reagent
2. Positive and negative control
3. Paper of latex
4. Patient serum specimens
5. Timer

RF kit

Procedure

1. Bring all reagents and specimens to room temperature.
2. Place one drop of the positive control and 40ul of the patient serum into separate circles on the slide.
3. Gently and add one drop of RF latex reagent on each circle of sample to be tested and control.
4. Use separate Applicator sticks/stir sticks to spread reaction mixture over entire area of the particular field.
5. Tilt the slide back and forth for **2 minutes** in a rotary shaker so that the mixture rotates slowly.
6. Observe for agglutination after 2 minutes under bright artificial light.

- **Positive result**: An agglutination of the latex particles suspension will occur within two minutes, indicating a RF level of more than 18 IU/ml.
- **Negative result**: No agglutination of the latex particles suspension within two minutes.