

SUMMARY AND CONCLUSION

Rheumatic fever is an inflammatory disease which follows beta-hemolytic, group A, streptococcal infections of throat, and characteristically tends to recur. Its name emphasizes the joints but it is the heart which makes it important.

It consists of a number of clinical manifestations, of which carditis, arthritis and chorea are the most common these tend to occur together but they may occur singly, however, or in various combinations in any individual patient. Other manifestations are less common like subcutaneous nodules, erythema marginatum. (*Taranta and Markowitz, 1981*).

It occurs most comonly in children between 5-15 years of age.

There is no striking sex difference except with chorea it is more common in females.

Its distribution is influenced by hygienic and socioeconomic standards of inhabitants.

There is no reliable laboratory test for diagnosis of rheumatic activity. All tests are not specific for rheumatic fever like acute phase reactants and ASOT but they are almost always abnormal during the active rheumatic process.

In the present study we tried to use the level of cICAM-1 for diagnosis of rheumatic activity.

ICAM-1 is a cytokine inducible adhesion molecule of the immunoglobulin supergene family expressed on cells of multiple linages at sites of inflammation.

Using enzyme linked immunosorbent assay (ELISA) we measured cICAM-1 level in the sera of 42 children 15 of them are normal healthy children (control group) and 27 children suffering from rheumatic fever [5 of them were first attack (2 cases were carditis and 3 cases were arthritis) and 22 cases were chronic (11 of them have activity during the study and 11 were chronic inactive Rh disease)] .

They were subjected to the following :

Full history taking, clinical examination, laboratory (ESR, CRP, ASOT), radiological (plain X-ray chest, ECG and ECHO cardiography) to some patients and ICAM-1 level.

The study revealed that :

- There was no significant correlation between sICAM-1 level and the age of the patients or duration of the disease.
- ICAM-1 level increased in cases of first attack (acute cases) with the mean of ICAM-1 level was 779.6 ± 343.3 ng/ml.
- ICAM-1 level increased in cases of recurrent rheumatic fever with activity with the mean of ICAM-1 level was 802.6 ± 265.9 ng/ml but of chronic inactive Rh disease was 390.9 ± 57.2 ng/ml.
- ICAM-1 level mean was 396.5 ± 87.3 ng/ml in the control group.
- All cases with activity whether 1st attack or recurrent cases with activity have (CRP and ASOT) positive and high ICAM-1 level.
- Our study demonstrated that there is direct relation between ESR and ICAM-1 level i.e increase ESR accompanied by increase in ICAM-1 level.

So sICAM-1 level increase during activity of the rheumatic fever regardless it is first attack or recurrent attack with activity .

Hence, if we can use antimono-clonal antibodies to ICAM-1 we can prevent cellular recruitment and interrupt the inflammatory process and occurrence of rheumatic activity.

Also the soluble intercellular adhesion molecule-1 (sICAM-1) determination may be used as indicator of rheumatic activity.