5. SUMMARY AND CONCLUSION

Rheumatoid arthritis is a chronic multisystem disease of unknown cause, characterized by synovial inflammation leads to cartilage damage and bone erosions and subsequent changes in joint integrity. To our knowledge, this appears to be the first study in India. Using a case control design we evaluated the usefulness of biochemical markers of synovium, cartilage and bone in RA patients and its association with traditional markers of disease activity in rheumatoid arthritis. We studied the levels of these biochemical markers in serum along with traditional markers in RA patients at base line and followed –up after one year.

The major findings from our study are,

- A significant increase in serum Hyaluronic acid was observed in RA patients in both the phases of the study in comparison with control which provides a strong evidence of its pathogenic role in rheumatoid arthritis.
- An elevation of new non-specific markers of joint inflammation such as YKL-40 and MMP-1 in serum showed that they are indirectly involved in RA pathogenesis.
- The serological markers such as anti-CCP and RF were found to be elevated in RA patients and a high prevalence of anti-CCP suggests that anti-CCP is a better marker than RF in RA patients.
• A significant association of anti-CCP with serum hyaluronic acid and COMP suggests that they are implicated in disease process by modifying synovium and cartilage metabolism.

• Non-specific serological markers CRP and ESR are elevated in RA patients but in our study, CRP was found to be a better marker than ESR in RA patients.

• In our study, the role of COMP and osteocalcin in the pathogenesis of RA is inconclusive. Moreover, no significant correlation with other biochemical markers made us to conclude further studies are needed to confirm its role in rheumatoid arthritis.