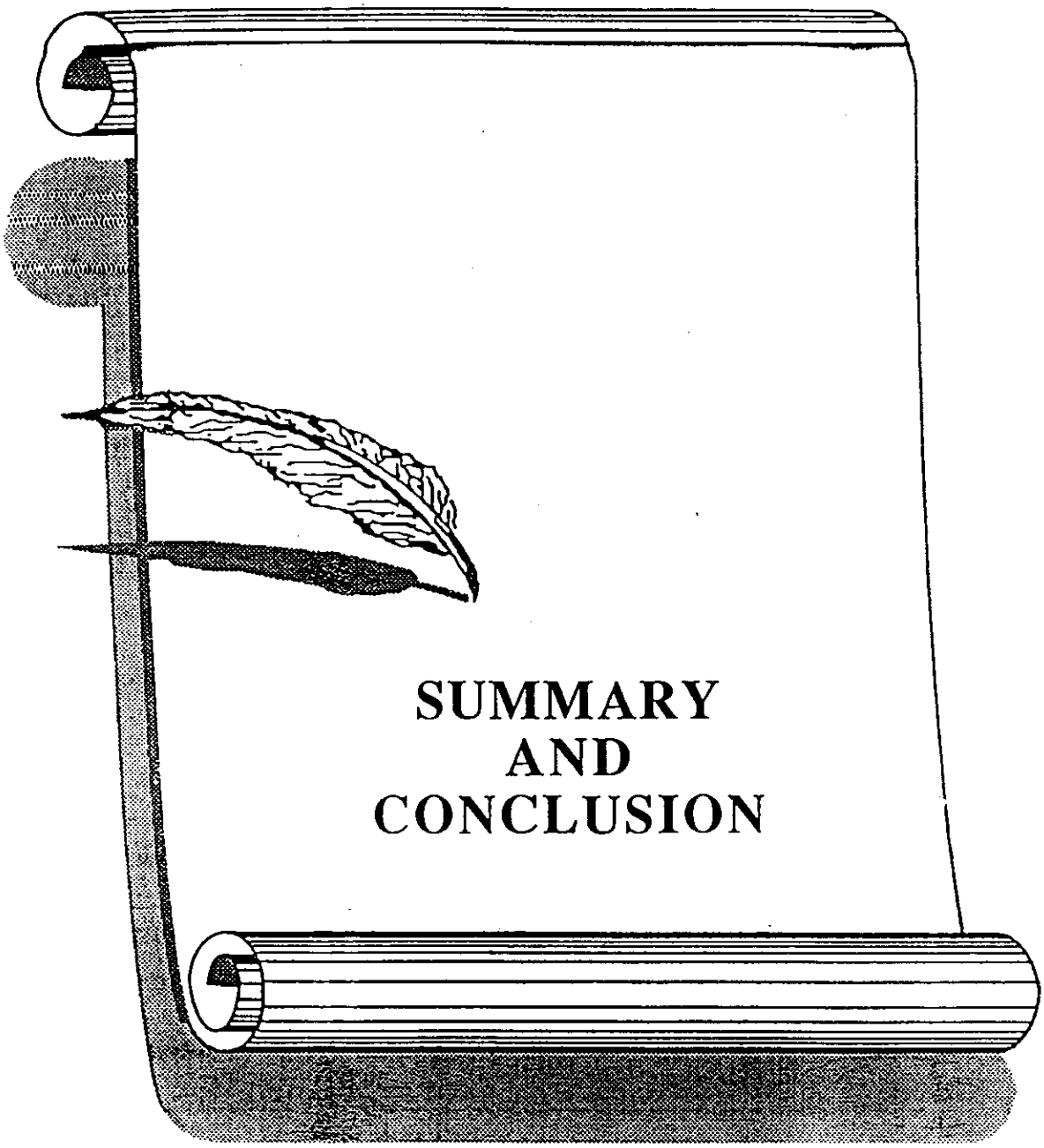

SUMMARY AND CONCLUSION

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The present study was performed on 50 children categorized as follows:

- Fifteen patients with chronic viral hepatitis
- Fifteen patients with chronic schistosomal hepatitis
- Twenty apparently healthy children as a control group

In addition to full history and clinical examinations, all children were subjected to the following investigations: liver function tests, stool analysis, hepatitis B surface antigen, abdominal ultrasonography, quantitative measurement of serum IL-2 and IL-4 using an enzyme linked immunosorbent assay. The diseased groups were subjected in addition to histopathological examination of liver biopsy and rectal snap.

As regards liver function tests, serum enzymes were significantly elevated in the diseased groups. Serum bilirubin was also significantly elevated in the diseased groups. Serum total proteins and albumin levels were significantly decreased in the diseased groups.

As regards serum IL-2, there was statistically significant change in its level in chronic liver disease groups in relation to the control group, with statistically significant decrease in chronic viral hepatitis patients and statistically significant increase in chronic schistosomal hepatitis patients. This serum test showed high sensitivity in picking up the chronic liver disease condition.

As regards serum IL-4 level, there was statistically significant elevation in chronic schistosomal hepatitis, but the elevation in this interleukin level was statistically insignificant in chronic viral hepatitis. This serum test showed low sensitivity and high specificity.

The changes occurring in the levels of these serum interleukins in chronic viral or chronic schistosomal hepatitis are considered as one of the immunological mechanisms offered by the body against invasion with antigens. The ability of the invading antigen (whether the schistosome or virus B) to impart on the T cell a state of unresponsiveness with subsequent decrease in interleukin 2 and 4 levels is one of the mechanisms used by the antigen to keep its persistence in the body with a

resulting more advancement of liver damage and more chronicity of the condition.

Considering the sensitivities and specificities of these serum tests, the high sensitivity of serum IL-2 determination for picking up a chronic viral or schistosomal hepatitis condition means that we could apply this serum test in the field of diagnosis of such liver diseases. On the other hand, the low sensitivity of serum IL-4 means that application of this serum test in the field of diagnosis of such liver disease is questionable. Application of these serum tests in detection of the prognosis of severity of chronic viral or chronic schistosomal hepatitis could be relied on as the levels of these interleukins are getting more lower with the advancement of the condition.

The introduction of each new laboratory parameter for disease should be coupled with questions about the efficiency, reliability, specificity and sensitivity of the measurement. In addition, it remains to be seen whether there is a real need for this new index in view of the quality of the available alternative indices.