CHAPTER IX

DISCUSSION

SLE, although a relatively uncommon disease, provides one of the best examples of an immune complex disease in man. An antigen of major importance in SLE is double stranded native DNA, and the ability to measure antibody to nDNA by various technic has proved particularly useful in diagnosing and monitoring disease activity (77, 78).

Many methods for determination of anti-DNA antibodies were used. Pesce et al was the only one who used ELISA technic for detecting anti-DNA antibody (7). The original technic used serial dilution in microtiter plate and reading the results visually. From this study, by working at 37 C at all incubate state, the operating time was shortened to 5-6 hours. There is a distinct advantage of finishing the test in one day. The polystyrene plate may be coated and stored for several months at 4 C. In routine laboratory the plate needed not to be coated with DNA each time the test is performed. The conjugate was found to be stable for 3 months stored at 4 C, the conjugate could be stored in small ampules for convenience to use at each working day. Distilled water can be substituted for the third

washing in washing step, and 1% gelatin can be used instead of 1% BSA which is more expensive.

The study of 40 control sera specimens, only two had antibody titers over 16. In 60 patients with SLE, 42 of these had antibody titers over 16 which was considered positive. The percentage positive of anti-DNA antibody was 70% which was paralled to those applied the Farr assay 75% (Wold et al 1968) and the technic of Radio immuno assay 69% (Lauge et al 1976) (Table 14).

Although it was found that ELISA gave variable results such as that used in these tests, could give erroneous results since denatured DNA is adsorbed much more than nDNA.

Studied serially on 64 sera from 8 SLE patients (ARA), it was found that anti-DNA levels were significantly decreased from the first day of treatment and became normal in 5 months after treatment. There was a reciprocal correlation between anti-DNA titers and complement levels. This study confirmed the usefulness of anti-DNA antibodies determination in clinical follow up cases. However, anti-DNA antibodies alone should not be used as the only test for monitoring the disease activity in SLE, other parameters such as serum complement levels and the measurement of circulating immune complexes may be other useful supplementary tests.

Our results clearly indicated that the ELISA technic may be used in routine laboratory if anti-DNA antibodies needed to be determined, however there was a 14% discrepancy between the ELISA and Farr technique.

TABLE 14 THE PERCENTAGE OF POSITIVE ANTI-DNA ANTIBODIES FOUND IN PATIENTS WITH SLE BY VARIOUS METHODS.

Reference and Year	No. of patients	%	Method
Robins et al 1957	30	73.3	Complement fixation test
Jokinen et al 1965	63	30.1	Indirect Hemagglutination test
Wold et al 1968	44	75	Farr technic
Kaffler et al 1969		60	Indirect Hemagglutination test
Tan et al 1973		60.8	Solid phase radioimmunoassay
Pesce et al 1974	42	42.9	Enzyme linked immunosorbent assay
Lange et al 1976		69	Radio immunoassay
The present technic 1979	60	70	Enzyme linked immunosorbent assay