

**SUMMARY
AND CONCLUSIONS**

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SCE analysis has come into use as a sensitive mean of monitoring DNA damage and genetic impairment. Chromosomal changes and breakage were described in many congenital and acquired diseases. Congenital diseases such as (xeroderma pigmentation, fanconia anaemia, ataxia telangiectasia and Bloom's syndrome), connective tissue diseases (SLE, RA, scleroderma and Behcet diseases).

This study was done to identify frequency of SCE in SLE, RA and scleroderma patients and relation between SCE frequency and activity of the diseases. The effects of using immunosuppressive drugs on SCE.

Forty patients were suffering from connective tissue diseases (15 SLE, 15 RA, 10 scleroderma) and 10 normal subjects were taken as control group.

All patients and control group were subjected to clinical examination, laboratory investigation and detection of the number of SCE.

The results were tabulated, graphed and statistically studied. The number of SCE statistically increased in SLE and also in RA. In scleroderma, SCE increased compared to control group.

The number of SCE more in SLE than RA and scleroderma. There is correlation between number of SCE and diseases activities and age of patients. The use of immunosuppressive drugs increase number of SCE and SCE increased with cyclophosphamide more than azathioprine and the least one is methotrexate.

From this results we conclude that:

- 1- The aetiology of increased number of SCE may be due to genetic factors which may cause the connective tissue diseases and DNA repair defect.
- 2- Activity of diseases increase the number of SCE due to the presence of antibodies which may cause damage to DNA.
- 3- The age of the patients increases the number of SCE due to prolonged exposure to exogenous and endogenous mutant factors.
- 4- Therapeutic alkylating agents and other cytotoxic drugs induce chromosomal damage and DNA repair defect and SCE increased with cyclophosphamide more than azathioprine and the least one is methotraxate.