Summary and Conclusion

The present study was conducted on three groups of human female volunteers at different phases of hormonal activity.

The first group included 30 adult females aging 25-35 years, which were subdivided into three equal subgroups :-

Subgroup I: included the normal menstruating adult females during the menstrual phase (reference group).

Subgroup II: included ten adult normal menstruating females during the proliferative phase of the menstrual cycle.

Subgroup III: included 10 adult normal menstruating females during the luteal phase of menstrual cycle.

The second group included 10 young girls aging 6-10 years.

The third group included 10 menopausal women aging 55 to 75 years.

Three samples were taken from each female:-

1-Buccal smear to study the buccal smear cells for the number of sex-chromatin positive cells.

2-Blood film to study the blood leucocytes for drumstick.

3-Blood sample for hormonal assay.

The results of the present study revealed the following:-

1- Sex steroid hormones have a definite effect on the frequency of X-chromatin.

2- The percentage of X-chromatin varies according to the level of sex steroidal hormones during normal menstrual cycle.

3- During pre puberty, a low level of X-chromatin was recorded with respect to mean frequencies in normal adult females.

4- In menopausal women also, the X-chromatin frequency was lower than in the normal and no fluctuation of X-chromatin frequency was recorded during the period of observation.

The present study may provide an evidence that the X-chromatin frequency was affected by the changes in the hormonal status but further studies are necessary to establish the mechanism by which the steroid hormones affect sex-chromatin frequency.