INTRODUCTION

It is known that all environments have a natural radioactivity of their own. Natural sources of radiation over which little or no control can be exerted are, cosmic rays, radioisotopes generated in air envelope, radiation from earth and building materials as well as radioactive substances that are found as natural constituents of the living body.

All ionizing radiations (α, β, δ, χ, neutorn and protons) at sufficient levels are lethal. However, the radiosensitivity of different biological targets show wide variations.

The complete process by which radiation induces chromosomal aberrations is complex and involves a chain of events. Radiation impinging on cells induces random pattern of particles tracks in those cells.

The mechanism by which ionizing radiations induces genetic instability is still a matter of speculation. One of the most obvious possibilities is that unrepaired lesions, presumably base damage, remain in the DNA for prolonged periods of time after irradiation.

From all the above mentioned, it has been thought of interest to investigate the biological effects of these ionizing radiations on bone marrow from the cytogenetic and histochemical point of view.