GENOTOXIC AND MUTAGENIC EFFECT OF A CERTAIN ANTI-INFLAMMATORY DRUG IN RATS.

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is one of the oldest group of diseases known to man, millions ofthe human population suffer now adays from this disease. This puts a great burden on the economics of the world.Anti-inflammatory drugs are usually prescribed for rheumatic diseases. Non-steroidal anti-Inflammatory drugs (NSAIDs) are widely used by physicians in treating rheumatism.The aim of this study is to investigate the effect of different doses of a NSAID (Lornoxicam) for a different period of time (12hrs, 24hrs, 48hrs, and 5 days) to studyits effect on the chromosomes and sperm head abonormality using classical methods of cytogenetics.In this study 130 rats (65 male and 65 female), Rattus norvegicus, varying from 100 to 150gm in weight and aged from 8-12 weeks old were used, these rats were obtained from the National Research Center (N.R.C) in Dukki.The female rats and also the male one were divided into four groups each. Each group consisted of 20 rats except the control group which consists of 10 rats.Group(1)10 rats40 rats (20 females and 20 males) were injected interperitoneally with daily dose of 1/20 LD50 of lornoxicam at different periods of time; 12hrs (One injection), 24hrs (one injections), 48hrs (two injections) and 5 days (four injections).Group (3):40 rats (20 females and 20 males) were interperitoneal injected with daily dose of 1/10 LD50 of lornoxicam at different periods of time; 12hrs, (one injection), 24hrs (one injections), 48hrs (two injections) and 5 days (four injections).Group (4):40 rats (20 females and 20males) were interperitoneal injected with daily dose of 1/5 LD50 of lornoxicam at different periods of time; 12hrs (one injection), 24hrs (one injections), 48hrs (two injections) and 5 days (four injections).Various chromosomal aberrations and sperm head abnormalities were observed, quantitated, and statistically analyzed.Structural aberrations:The highest percentage of chromosomal abnormalities observed in bone marrow cells of male and female rats was found clearly in the form of deletion, centric fusion, chromatid gaps and centromeric attenuation while the chromatid fragment and the end to end association were the lowest value of aberrations appeared.The cells with more than one type of aberrations in female and male rats are clearly with