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Quinolone Arthropathy Induced by Ofloxacin in Juvenile Rats: A Light Microscopic Study

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Abstract: This study was conducted to examine the development, progression and reversibility of cartilage lesions in juvenile rats that had been given ofloxacin, a fluoroquinolone. Four-week-old rats were treated with an oral dose of 900 mg/kg/day of ofloxacin for 7 days. The animals were sacrificed at different (1st day, 1st week, 2nd week, 4th week, 8th week, 12th week, 16th week) after the completion of the administration and the knee joints were prepared for light microscopic analysis. The lesions were demonstrated in the articular cartilage of all the animals. Acellular, oedematous matrix areas, and cavity formations were observed. These lesions progressed to extensive erosions at the end of the fourth month. Thus we concluded that arthropathy induced by ofloxacin is not reversible and the damage is persistent with increasing severity over time.

Key Words: Fluoroquinolone, ofloxacin, articular cartilage, chondrotoxicity, rat

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