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## Effects of intensive cell phone (Philips Genic 900) use on the rat kidney tissue.

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Source

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Abstract

PURPOSE:

To investigate effects of electromagnetic radiation (EMR) emitted by cell phones on the rat kidney tissue.

MATERIALS AND METHODS:

Twenty-one male Albino rats were divided into 3 groups, each comprising 7 rats. Group 1 was exposed to a cell phone in speech mode for 8 hours/day for 20 days and their kidneys were removed. Group 2 was exposed to EMR for 20 days and then their kidneys were removed after an interval of 20 days. Cell phone used in the present study was Philips Genie 900, which has the highest specific absorption rate on the market.

RESULTS:

Light microscopic examination of the kidney tissues obtained from the first group of rats revealed glomerular damage, dilatation of Bowman's capsule, formation of large spaces between the tubules, tubular damage, perivascular edema, and inflammatory cell infiltration. The mean severity score was  $4.64 \pm 1.7$  in group 1,  $4.50 \pm 0.8$  in group 2, and 0 in group 3. While there was no significant difference between group 1 and group 2 ( $P > .05$ ), the mean severity scores of groups 1 and 2 were significantly higher than that of the control group ( $P = .001$  for each).

CONCLUSION:

Considering the damage in rat kidney tissue caused by EMR-emitting cell phones, high-risk individuals should take protective measures.

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