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**EFFECT OF CIGARETTE SMOKE EXPOSURE ON THE EXPRESSION OF MUTANT P53 IN TRANSITIONAL CELLS OF THE BLADDER** An Experimental Study on *Rattus norvegicus*

**Abstract**

We studied the effect of exposure to cigarette smoke on the expression of mutant p53 transitional epithelial cells of the bladder to prove the relation of smoking and bladder cancer. In this experimental study in rats (*Rattus norvegicus*) we used post test control group design. Forty-four rats were allocated randomly into 4 groups; the first 2 groups were exposed to cigarette smoke for 30 days and 60 days respectively, while the other 2 were control groups. All animals were euthanatized and cystectomy was done at the end of the experiment. Bladder slices were examined using HE stain to confirm the histopathologic structure of the bladder, then immunohistochemistry (IHC) stain was applied using p53 monoclonal antibody (Pab 1801). A positive result to IHC stain indicates that the expression of mutant p53 supposed to play a role in the pathophysiology of bladder cancer. Normal transitional cells were found in all animals in each with HE stain, while the IHC stain showed negative results in all control groups and in the 30 days group. However, a positive result on mutant p53 was found in the 60 days group. This study shows that 60 days of cigarette smoke exposure can alter p53 expression in transitional epithelial cells of the bladder.

**Keyword :** mutant, p53, cigarette, smoke, transitional, epithelium, ,

**Daftar Pustaka :**