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NICOTINE EFFECT ON THE STRUCTURE AND FUNCTION OF PROSTATE GLAND OF RATS
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Objective
This study was carried out to investigate the effect of nicotine on histological features and androgen receptor of rat prostate gland.

Methods
Eighteen Sprague-Dawley male rats, 7-9 weeks old with average body weight of 200-250g were randomly divided into nicotine (0.5mg/100g) and control (0.1m1/100g) groups. The rats were treated daily for 100 consecutive days. The prostate gland was extracted and fixed in formalin solution prior to histological and immunohistochemical processes.

Result and Discussion
The prostate gland of the nicotine group indicated a reduction in the epithelial height of the mucosal linings with minimal acidoophilic secretion in its lumen. On the contrary, presence of tall epithelial height and acidoophilic secretion was observed in the gland lumen of the saline group. Similarly, in the immunohistochemical study, weak androgen receptor staining was observed in the epithelial cells of prostate gland of nicotine treated rats suggesting disruption of the androgen protein. However, high intensity of androgen staining was noticed in the saline group.

Conclusion
This study suggested that nicotine injection would affect structure and androgen receptor of rat prostate gland.

Keywords: Nicotine, prostate gland, androgen receptor, histology, rat