

Histological changes of mice lungs after daily exposure to different concentrations of incense smoke

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Since the discovery of Agarwood (incense tree), many studies reported its characteristic effects and variable benefits, as either to produce Arabian incense or as a traditional medicine against many diseases. Laboratory experiments were carried out on the effect of different concentrations of incense smoke inhalation on the lung weight and tissue in female mice. This research derives its importance from the fact that incense is heavily used in Saudi Arabia in the absence of thorough studies of its effects on health. Eighty animals are used in this study, and are divided into four groups, each is 20 animals. Three groups are exposed to different concentrations (2, 4 and 6 gm) of incense smoke daily for three months, and the fourth group is the control. At the end of each month, five animals from each group were dissected. Obtained data showed an increase but not significant in animal body and lung weight, this results return to natural increase as a result of normal growth of animals. Light microscope reveals some changes in the lung tissue, such as focal emphysema, rupture in the alveolar walls, hemorrhage, congestion, edema and few peri-bronchial lymphoid cells. After continuous exposure to incense smoke focal necrosis and degradation are observed in some cells of epithelial bronchioles. Also, fibrosis of peri-bronchial, thickening in alveolar walls and aggregation of lymphoid cells are demonstrated in some lungs sections.

Conclusion: According to the above manifestations it could be concluded that exposure to incense smoke causes pulmonary harmful effects. Therefore, we can recommend that incense smoke will be used only in open places to reduce its harms.

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