

EXPERIMENT NO.: 16

DATE:

AIM: TO STUDY THE ANTI-ASTHMATIC EFFECT OF DIPHENHYDRAMINE ON GUINEA PIG

REQUIREMENTS:

Animal: Guinea pig of either sex

Apparatus: Histamine chamber, Histamine aerosol apparatus with compressor, Sphygmomanometer and nebulizer.

Drug: Histamine (1%), Saline, Diphenhydramine (40 mg/mL)

PRINCIPLE:

When guinea pig are exposed to aerosol containing histamine it causes bronchoconstriction leading to asphyxia and death. Antihistamine drugs prevent or prolong the time of onset of attack by histamine aerosol.

The death is preceded by dyspnea and convulsion. The animal can be saved if the aerosol is promptly removed and stopped.

The instrument consists of a transparent box of Perspex divided by perforated wall into two. There is a small hole to spray aerosol. The spray is done using nebulizer which is connected to a sphygmomanometer and compressor. One side of the box has a movable partition to remove aerosol.

PROCEDURE:

- Guinea pigs of identical weight are selected for the experiments.
- One guinea pig that has received saline solution is placed in one chamber and labeled as control.
- One another guinea pig received Diphenhydramine (40 mg/kg) body weight.
- The aerosol containing histamine is spread by nebulizer into the chamber and record the time till animal (control) shows dyspnea and convulsion.
- The lid is quickly opened to remove aerosol and animal is allowed to recover.

OBSERVATION:

The animal treated with diphenhydramine (40 mg/mL) does not get convulsions while saline treated animal produces the convulsion.



TEACHER'S SIGNATURE