



“बेटी बचाओ, बेटी पढ़ाओ”

**JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR**  
**Faculty of Pharmaceutical Science**

<b>Faculty Name</b>	- JV'n Prof. Dr. Dharmendra Ahuja (Professor & Dean)
<b>Program</b>	- 5 <sup>th</sup> Semester/3rd Year
<b>Course</b>	- B.Pharm
<b>Session</b>	- Pharmacology Practical

**Academic Day starts with–**

- Greeting with saying ‘**Namaste**’ by joining Hands together following by 2-3 Minutes Happy session, Celebrating birthday of any student of respective class and **National Anthem**

**To study the effects of Drugs on Dog BP and Heart Rate**

**Aim of the experiment**

**To study the effects of Drugs on Dog BP and Heart Rate**

**Overview**

Numerous drugs act on the heart. Adrenergic and cholinergic drugs create inverse impacts. These drugs act through individual receptors. A few drugs act specifically on the heart. This try illustrates the impacts of some drugs (agonists, opponents, calcium and potassium) on the dog heart.

**Materials required**

1. Starling's heart lever
2. Stand
3. A kymograph with drum and smoked paper

**Theory:**

**Drugs & Pharmacological Actions**

<b>Drug name (Dose in mg/kg)</b>	<b>Pharmacological Action</b>
<b>Epinephrine (Adrenaline)</b> Dose : 2 Range : 1 – 3 Mg/kg Body Weight	It fortifies the alpha and beta adrenergic receptors. Routine dosages will increment the BP taken after by a brief drop some time recently coming to the basal level (biphasic reaction due to alpha and beta receptor reactions).
<b>Norepinephrine (Noradrenaline)</b> Dose : 3 Range : 2 - 5 Mg/kg Body Weight	It stimulates mainly the alpha and beta1 receptors. The heart rate is generally reduced due to vagal reflex in response to increased BP.
<b>Isoprenaline</b> Dose : 3 Range : 2 - 5 Mg/kg Body Weight	It could be a strong, non- particular beta adrenergic stimulant. It increments the systolic BP, but diminishes the diastolic BP. Since the diminish is more articulated than the increment, the cruel blood vessel weight ordinarily falls.
<b>Acetylcholine</b> Dose : 5 Range : 2 - 10 Mg/kg Body Weight	Acetylcholine (ACh) causes a sharp a fall in BP.
<b>Histamine</b> Dose : 3 Range : 2 - 5 Mg/kg Body Weight	Acts on H1 and H2 receptors to produce a fall in BP Stimulation of H1 produces a rapid onset short lived decrease in BP whereas H2 stimulation leads to a fall characterized by slower on set and longer duration.
<b>Ephedrine</b> Dose : 100 Range : 100-200 Mg/kg Body Weight	It acts on both alpha and beta receptors and in expansion upgrades the discharge of norepinephrine from thoughtful neurons. It increments the BP and heart rate.

<b>Phentolamine</b> Dose : 1000 Mg/kg BodyWeight	This drug, an alpha blocker, reduces BP
<b>Propranolol</b> Dose : 1000 Mg/kgBody Weight	It is a beta blocker which reduces BP and heart rate.
<b>Atropine</b> Dose : 750 Range :500-1000 Mg/kg Body Weight	This drug is a muscarinic cholinergic antagonist. It competitively antagonizes ACh. .

### PROCEDURE :

1. Assembling of Dog heart is done as per the routine procedure.
2. Inject the drugs and observe the following parameters
  - (a) a. Heart rate
  - (b) b. Blood Pressure
- 3 Analyze the result as per the standard response mentioned in theory section..

**Result:** Different drugs shown response as per their pharmacological receptors dependent action, ana lysis of them was done.

- **Next Topic-**

- Evaluation of Diuretic Activity Using Metabolic Cage

- **Academic Day ends with-**

National song 'Vande Mataram'

### Reference:

- Ex Pharm Virtual Pharmacology Version 0.01 Accesses on 3st August 2023.