

MEDICINAL CHEMISTRY-I – BP402T

UNIT: 2

CLASS: 8

TOPIC: ADRENERGIC BLOCKERS

ADRENERGIC BLOCKERS

Also called as sympatholytics

These are the agents bind reversibly or irreversibly to adrenergic receptors and produce no response of these receptors.

These are of 2 types

ALPHA ADRENERGIC BLOCKERS

NON SELECTIVE ADRENERGIC BLOCKERS

1. Phenoxybenzamine

Structure

IUPAC name

It binds covalently to both alpha one and alpha two receptors

It is irreversible and non competitive the only way to overcome this is to synthesize new adrenoreceptors.

It requires a day or longer. It lasts for 24 hours.

Used in the treatment of pheochromocytoma, raynaulds disease, frostbite

Side effects

Postural hypotension, tachycardia etc.

2. Phentolamine

Structure

IUPAC name

Uses

It is a reversible non competitive inhibitor that binds with both alpha receptors

Its action lasts for 4 hrs

Used in the treatment of pheochromocytoma, prevent dermal necrosis, hypertensive crisis.

Side effects

Postural hypotension, tachycardia etc.

3. Tolazoline

Structure

IUPAC name

Uses

It is a non selective adrenergic blocker.

It causes vasodilation of peripheral vascular smooth muscles.

It is a vasodilator that is used to treat spasms of peripheral blood vessels.

Side effects

Abnormally low bp, bleeding of the stomach or intestines, decreased blood platelets, kidney failure etc.

Synthesis