Selective Alpha-1 Blockers

Selective α₁ blockers can be recalled by their drug names, with end with an "osin" suffix. This class of drugs exerts its action by blocking α₁ adrenergic receptors in smooth muscle, arterolar and central nervous tissues. They are used to treat hypertension, while tamsulosin is specifically indicated for treatment of urinary retention in BPH. These drugs limit the body's ability to maintain blood pressure homeostasis, and the symptoms of syncope and orthostatic hypotension are seen in patients, especially in their first dose of medication. Tamsulosin also has the side effect of priapism.



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"-osin" suffix
Ocean
These medications can be remembered by having an "osin" suffix in their drug names: Tamsulosin, Prazosin, Terazosin, Doxazosin

Mechanism of Action

Blocks Alpha1 Receptors
Blocking the Afro (1) Wand Receptor
These medications selectively block α₁adrenergic receptors in smooth muscle, arteriolar and central nervous system tissues. This leads to vasodilation in arteries. Tamsulosin is selective for α_{1a} receptors, which belong in the prostate, and is indicated for BPH while having little activity on hypertension.

Indications

Hypertension
Hiker-BP
By acting on α₁adrenergic receptors in arteriolar smooth muscle and causing vasodilation, these medications treat hypertension.

Benign Prostatic Hyperplasia (BPH)
Bunny Plum Hiker-plates
Tamsulosin is a drug which is selective for α_{1a}receptors, which exist in the prostate. Thus, it is helpful in treating urinary retention in BPH, but has little effect on blood pressure.

Side Effects

Syncope
Sink-of-peas fainting
This drug class may cause syncope, and this is especially seen with Prazosin. The body cannot adequately maintain cerebral blood pressure without α₁ activity and this leads to syncope and dizziness.

Orthostatic Hypotension
Oar Hippo-BP
These medications are known for causing orthostatic hypotension, as the body poorly controls blood pressure without α₁ input. Patients are cautioned to stand up slowly while on this medication.There is a "1st dose phenomenon" which occurs the first time a patient is introduced to an α₁ blocker, where a sudden and severe fall in blood pressure occurs with body position changes.Tamsulosin has been linked to priapism.

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