ACE inhibitors

ACE inhibitors prevent vasoconstriction, so help keep blood pressure down

GENERIC AND PROPRIETARY NAMES
Angiotensin-converting enzyme (ACE) inhibitors include:
- Captopril: Capoten.
- Cilazapril: Vascace.
- Enalapril: Innovace.
- Fosinopril: Staril.
- Imidapril: Tanatril.
- Lisinopril: Carace, Zestril.
- Moexipril: Perdix.
- Perindopril: Coversyl.
- Quinapril: Accupro.
- Ramipril: Tritace.
- Trandolapril: Gopten, Odrik.

There are also many combined products that include ACE inhibitors.

ACTION
- Inhibits the conversion of angiotensin I to angiotensin P, which is a vasoconstrictor, therefore relaxing blood vessels and reducing blood pressure.

CLASSIFICATION
- Drugs affecting the renin-angiotensin system.

INDICATIONS
- Heart failure.
- Hypertension.
- Diabetic nephropathy.
- Prophylaxis of cardiovascular events.

CONTRAINDICATIONS
- Hypersensitivity.
- Renovascular disease.
- Pregnancy.

CAUTIONS
- Patients on diuretics.
- Peripheral vascular disease.
- Renal impairment.
- Aortic stenosis.
- Angio-oedema.
- Breastfeeding.

SIDE-EFFECTS
- Profound hypotension.
- Renal impairment.
- Persistent dry cough.
- Angio-oedema.
- Rash.
- Pancreatitis.
- Upper respiratory tract symptoms.
- Gastrointestinal effects.
- Altered liver function, jaundice and hepatitis.
- Blood disorders.
- Headache.
- Dizziness.

INTERACTIONS
- Potassium-sparing diuretics may lead to hyperkalaemia.
- Other diuretics may lead to hypotension.
- Alcohol.
- Alpha-blockers.
- Beta-blockers.
- Calcium-channel blockers.
- Corticosteroids.
- NSAIDs.
- Potassium-containing drugs.

ADMINISTRATION
- Oral.

NURSING CONSIDERATIONS
- Hypertension should be managed according to appropriate guidelines.
- Treatment with an ACE inhibitor can be started in the community in the majority of people with heart failure.
- In patients taking diuretics, close supervision is needed when commencing treatment.
- The initial dose of ACE has a risk of first-dose hypotension, therefore patients should be advised to sit or lie down for 2-4 hours after this.
- Evaluate therapeutic response.

PATIENT TEACHING
- Advise patients to avoid driving and other hazardous work until they are confident that they have no dizziness or fainting from possible hypotensive side-effects.
- Avoid excess intake of alcohol since this can enhance hypotensive effect.
- This medication should not be stopped without medical consultation.
- Advise patients to rise slowly in order to avoid postural hypotension.

REFERENCES

Nurses should refer to manufacturer’s summary of product characteristics and to appropriate local guidelines.