Gabaplus

(Gabapentin) **Capsules**

100, 300 & 400 mg

گابا پلس

(گابا پینٹن) کیپسولز

۱۰۰، ۳۰۰ اور ۴۰۰ ملی گرام

Composition:
Each capsule contains:
Gabapentin (U.S.P.) .....100 mg
Product Complies (U.S.P.) Specs.

Each capsule contains:
Gabapentin (U.S.P.) .....300 mg
Product Complies (U.S.P.) Specs.

Each capsule contains:
Gabapentin (U.S.P.) .....400 mg
Product Complies (U.S.P.) Specs.

PHARMACOLOGICAL PROPERTIES:
Mechanism of Action:
Gabapentin is related to the neurotransmitter GABA (gamma-aminobutyric acid). Gabapentin has proven affinity for special site in brain tissues such as neocortex and hippocampus. Though exact mechanism of its CNS depressant and anticonvulsant activity is not fully understood, it is thought to be active through peptide-binding sites (receptors).

Pharmacokinetics and Metabolism:
Absorption:
Gabapentin achieves peak plasma concentration within 2-3 hours. Absolute bioavailability of 300 mg and 400 mg gabapentin capsule is approximately 55%. Pharmacokinetics of gabapentin is not affected by food. With increased dose of gabapentin, excess drug is excreted and absorption decreases. Absolute bioavailability following doses of 300 and 600 mg gabapentin is 57% and 42%, respectively. Elimination half-life is 5 - 7 hours in normal subjects.

Distribution:
Gabapentin is not bound to plasma proteins and has an apparent volume of distribution of 58 + 6L (Mean+SD). In patients with epilepsy, its concentrations in CSF ranged from 8-34% of corresponding steady-state through plasma concentrations.

Excretion:
Gabapentin elimination rate, plasma clearance and half-life are dependent on creatinine clearance as it is exclusively removed by renal excretion. Its metabolism is not affected by liver enzyme system.

Elderly:
Due to age related deterioration in renal functions in elderly patients (>60), there will be decrease in gabapentin plasma clearance and increase in elimination half-life. Its excretion will be directly proportional to creatinine clearance. Gabapentin can be removed from plasma by haemodialysis.

INDICATIONS:
There are many evolving indications of gabapentin under trial. Its main indications are for the treatment of neuropathic pain and epilepsy.

1) Neuropathic pain: Neuropathic pain is pain due to diseases involving the nervous system. Variety of different diseases such as diabetes, shingles, nerve injury and other diseases affecting nervous system cause it. Gabapentin is effective in various types of neuropathic pain.
Gabapentin is recommended in neuropathic pain of:
a) Peripheral Diabetic Neuropathy,
b) Trigeminal Neuralgia,
c) Post Herpetic Neuralgia (Shingles)

2) Epilepsy: Gabapentin is used to treat various forms of epilepsy. It is effective as adjunctive therapy with other anti-epileptic drugs in patients who have shown no or poor response in achieving seizure

control. Gabapentin is effective in controlling both simple and complex partial seizures with or without secondarily generalized tonic clonic seizures.
Gabapentin studies are in progress to establish its efficacy in the treatment of, Restless leg syndrome, Depression, Maniac disorders, Unspecified Headache and Migraine.

CONTRAINDICATIONS:
Gabapentin is contraindicated in patients who are hypersensitive to gabapentin.
Enough data is not available for its safety in children, during pregnancy and lactation. Caution should be exercised in renal compromised patients.

DOSAGE AND DIRECTION FOR USE:
1. Adults and children over 12 years:
Usual effective dose: 900-1800 mg/day in 2-3 divided doses. Care should be taken to avoid a period of more than 12 hours between two doses. In certain patients, such as elderly patients, it may be preferable to up titrate the dose up to an effective level.
A suggested schedule is to start with 100 mg at night and increase with 100 mg per day up to 600 mg in 2 - 3 divided doses. Further increase can be made depending on patient's response.

2. Paediatric use :
Safety and effectiveness of gabapentin in children under 12 years have not been established. However, physicians can decide to prescribe taking into account the necessity and safety issues.

3. Elderly:
When prescribing gabapentin to elderly patients (>65 years), careful monitoring should be carried out for adverse events. Older patients may require dosage adjustment depending on their baseline renal functions (creatinine clearance).

4. Compromised renal function:
Patients with impaired renal functions should be prescribed with caution depending upon the state of their creatinine clearance as elimination of gabapentin is decreased in patients with impaired renal functions.

Renal function

Creatinine Clearance (ml/min)	(Total Daily Dose (mg/day)	Dose Regimen (mg)
>60	1200	400 three times a day
30-60	600	300 twice a day
15-30	300	300 once a day
<15	150	300 every other day

(In patients with haemodialysis, loading dose of 300-400 mg with maintenance dose of 200-300 mg after four hours of each dialysis session.)
• Gabapentin can be used as concomitant therapy with phenobarbital, phenytoin, valproic acid and carbamazepine without concern for alteration of the plasma concentrations or serum concentrations of gabapentin or the other anti-epileptic agents.
• While discontinuing gabapentin, a slow process should be adopted. Likewise, addition of an alternate medication should be incremental.

SIDE EFFECTS AND SPECIAL PRECAUTIONS:
Side Effects
In addition to the commonly occurring events (somnolence, dizziness, ataxia, headache, nystagmus, tremor, fatigue, diplopia, nausea and/or vomiting and rhinitis), following table depicts the events that occurred in descending order of frequency against different body systems:

System	Adverse events
Nervous system	Dizziness, somnolence, ataxia, nystagmus, tremor, dysarthria, amnesia, confusion, insomnia, twitching, paraesthesia, vertigo, abnormal coordination
Digestive system	Nausea, vomiting, abdominal pain, dyspepsia, dry mouth, constipation, diarrhoea, and increased appetite
Respiratory system	Rhinitis, pharyngitis, cough, respiratory tract infection
Skin and appendages	Rash, pruritus, abrasion, acne, maculopapular rash
Special senses	Diplopia, amblyopia
Psychobiologic function	Nervousness, depression,emotional lability
Urogenital system	Impotence
Musculoskeletal system	Myalgia, fatigue
Cardiovascular system	Vasodilation
Blood and lymphatic system	Leucopenia, purpura
Body as whole	Fatigue, headache, weight increase, back pain, peripheral oedema, viral infection, fever

There are reports of 8 sudden and unexplained deaths in a cohort of 2203 patients treated with gabapentin. However the incidence of 0.0038 deaths per patient year with gabapentin is not much different from 0.0005 to 0.003 in a similar population of patient with epilepsy.
Additional post-marketing adverse events reported include pancreatitis, erythema multiforme, Stevens-Johnson syndrome and elevated liver enzymes.

Interactions:
There are no interactions with other anti-epileptics such as phenobarbitone, phenytoin & valproic acid. Gabapentin steady-state pharmacokinetics are similar for healthy subjects and patients with epilepsy receiving anti-epileptic agents.
Concurrent administration of gabapentin with oral contraceptives containing norethindrone and/or ethinyl estradiol, does not influence the overall pharmacokinetics of either component.
Antacid containing magnesium and aluminium reduces gabapentin's bioavailability almost by 24%. It is recommended that gabapentin be taken about two hours following antacid administration. Renal excretion of gabapentin is unaltered by probenecid. A slight decrease in renal excretion of gabapentin observed when it is co-administered with cimetidine is not expected to be of clinical importance.

SPECIAL PRECAUTIONS:
Usage in Pregnancy:
As the animal studies do not establish clear cut guideline for its safe use in pregnancy, this drug should be used in pregnancy only if the potential benefits to the patient justifies the potential risk to the fetus.

Usage in Nursing Mother:
In nursing mother, decision of continuing gabapentin should be made taking into account the importance of the drug to the mother.

General:
Sudden and abrupt withdrawal of gabapentin in epileptic patients should be avoided as it may precipitate status epilepticus. This should be done gradually over a period of one week. Patients driving, operating machinery or performing any hazardous tasks should take special care.

KNOWN SYMPTOMS OF OVERDOSAGE AND PARTICULARS OF ITS TREATMENT:
No specific information is available on the treatment of overdose with gabapentin, although haemodialysis has been shown to be effective in eliminating gabapentin. Treatment is symptomatic and supportive, consistent with established medical care. Overdoses of gabapentin up to 49 g ingested at one time have been reported in four people, all of whom recovered fully. Symptoms of overdose included dizziness, double vision, slurred speech, drowsiness, lethargy and mild diarrhoea. In patients with renal impairment haemodialysis may be indicated. Reduced absorption of gabapentin at higher doses may limit drug absorption and hence minimize toxicity at the time of overdosing.

How supplied:
Gabaplus 100 mg capsules are available in blister pack of 10's
Gabaplus 300 mg capsules are available in blister pack of 10's
Gabaplus 400 mg capsules are available in blister pack of 10's

Store below 30°C in a dry place, protect from light.
To be dispensed on the prescription of a registered medical practitioner only.
Keep out of the reach of children.

خوراک: ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔
دوا کو ۳۰ ڈگری سینٹی گریڈ سے کم درجہ حرارت پر خشک جگہ پر رکھیں،
روشنی سے بچائیں۔ صرف رجسٹرڈ ڈاکٹر کے نسخے پر فروخت کریں۔
بچوں کی پہنچ سے دُور رکھیں۔

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