Drug Update

Tiapride

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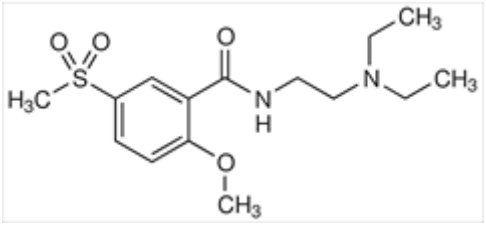
Composition : Tiapride Hydrochloride



Strengths : 25mg, 50mg, 100mg.

Class : Tiapride is an atypical antipsychotic agent belonging to the group of substituted benzamide compounds. It is chemically designated as N-(2-Diethylaminoethyl)-2-methoxy-5-methylsulphonylbenzamide hydrochloride. Its molecular weight is 364.9 and similar to sulpiride [1].

Pharmacodynamic properties :

It is a selective D2/D3 dopamine receptor antagonist without any affinity for other neurotransmitter receptors like those of serotonin, noradrenaline and histamine. Its ability to block D2/D3 receptors selectively in limbic system accounts for its clinical efficacy on aggression and agitation treatment in elderly. Also lack of affinity on α1,α2- adrenergic, H1 histaminergic and muscarinic receptors leads to good general tolerance (particularly cardiorespiratory), less sedation and lack of cognitive impairment [2].
Other effects: It has been shown to cause increase in prolactin levels and menstrual cycle disturbances [3]. It has very little seizure inducing property and does not increase the epileptogenic effects of threshold doses of classical convulsants in mice [4].

Pharmacokinetic properties :

The pharmacokinetic profile of tiapride has been studied in healthy volunteers, in subjects with renal function disorder and in patients with Huntington's disease. Its bioavailabilty following oral or intramuscular administration is

75%. Peak concentrations are achieved within 0.4- 1.5 hrs and steady state occurs 24 - 48 hrs after 3 times daily dosing. It is rapidly distributed and not much protein binding is found. It is eliminated mainly by kidneys, principally in unchanged form with a small percentage as de-ethylated and N-oxide metabolites. The elimination half-life is approximately 3-5 hours and may increase with age and renal impairment (in severe renal insufficiency increasing to 21.6 hours) thus requiring dose reduction [5-6].

Tolerability :

It is well tolerated in clinical trials. Most frequently reported adverse events were drowsiness, extrapyramidal symptoms, dizziness and orthostatic hypotension. Serious adverse events are reported to occur rarely (1.7 per 100 000 treatment months) [6]. There have been few instances of neuroleptic malignant syndrome found [7-8]. In comparision to haloperidol [9] and chlorpromazine [10], it is better tolerated.

There has been a report of erythema multiforme in a 74 year old patient receiving tiapride 300mg/ day which disappeared within 2 weeks of discontinuation [11]. Also single case report of tiapride accelerating lung cancer was found [12].

Indications : [13- 20]

It is indicated for treatment of

1) Irritable, agitated or aggressive behaviour of elderly
2) Neuroleptic induced tardive dyskinesia mainly oro-bucco-lingual type
3) Alcohol withdrawal
4) Tourette syndrome and tic disorder
5) Huntington’s chorea
6) Hallucinations
7) Headache

Contraindications : [3,7,21,22]

1) Hypersensitivity to tiapride hydrochloride or any of its excipients
2) Prolactin dependent tumors
3) Pheochromocytoma
4) Concomitant treatment with levodopa
5) Neuroleptic malignant syndrome

Pregnancy and lactation : No adequate data is available.

Dosage and administration : [5,6]

Recommended dosage of oral tiapride is 200 – 300 mg per day in divided doses. It should be started with 50mg and gradually increasing to 200- 300mg. Higher dosages are recommended for the treatment of abnormal movements (300 to 800 mg/day) and may be necessary for alleviation of tremor during alcohol withdrawal. For the treatment of delirium or pre-delirium during alcohol withdrawal, intravenous or intramuscular tiapride 400 to 1200 mg/day given 4- to 6-hourly is recommended, increased to 1800 mg/day if required.

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