Baclofen in The Treatment of Intractable Hiccups

Sir,

Reference to the article published in your journal Vol. 50; October 2002. “Baclofen in the Treatment of Intractable Hiccups” by Dr. Patial.

With reference to the above mentioned article, we agree Baclofen is a good drug in the treatment of intractable hiccups. Since we have some experience using this drug in our patients we like to discuss the important aspect of this drug mainly its toxicity noted in end stage renal disease (ESRD).

Baclofen is a p-Chlorophenyl derivative of the neurotransmitter gamma-amino butyric acid which inhibits monosynaptic and polysynaptic reflexes, possibly through hyperpolarisation of different fiber terminals. It decreases the number and severity of spasms and relieves associated pain, cramps and muscle rigidity. Clinical manifestation of overdose includes absence of reflexes, vomiting, muscular hypotonia, marked salivation, drowsiness, visual disturbances, seizures, respiratory depression and coma.

Four cases of end stage renal disease on maintenance haemodialysis (thrice a week) received baclofen 2.5 mg/day (recommended dose in renal failure). Three cases received for intractable hiccups and one case for spasticity and pain due to hemiparesis. All four patients presented with altered sensorium within twelve to twenty four hours of receiving Baclofen. Two patients had respiratory depression needing ventilatory support. Routine biochemical parameters including urea, creatinine, electrolytes, liver function test, calcium and phosphorus were normal.

Baclofen, being a centrally acting GABA agonist is known to cause neurotoxicity. In view of its being excreted almost solely by the kidneys, dosage modifications have been recommended in patients with renal dysfunction. Baclofen toxicity in ESRD patients receiving the drug in modified doses have been reported earlier. The presentation with altered sensorium has been similar to the previous reports. Baclofen levels could not be estimated in our patients, however stopping of the drug with supportive therapy and intensive dialysis lead to disappearance of symptoms. The efficiency of haemodialysis in improving symptoms has been recorded earlier. In conclusion ESRD patients receiving Baclofen have high propensity to develop the toxicity hence it should be suspected in patients receiving the drug and presenting with altered sensorium. Haemodialysis is effective in alleviating the clinical symptoms shortening the recovery time. Adequate precaution should be taken using Baclofen in ESRD patients or it is better to avoid this drug in ESRD patients.

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patients and urea and creatinine is raised in all, the biochemical profile of fourth patient is missing. Is it a typing error?

These patients had features of baclofen overdose/toxicity with one dose (2.5 mg) of baclofen and serum levels of baclofen were not estimated. The toxic effects (undesirable deleterious effects) of drug are pharmacological effects and are related to drug concentration. A recent case report has reviewed the baclofen toxicity in 29 patients reported from the English language literature from 1966 to 2000. Four patients had ESRD and were on regular haemodialysis (HD). Baclofen toxicity in these patients developed after a median dose of 63 mg. It was many times higher than the toxic dose in Indian patients.

Besides conservative treatment and HD, atropine has also been used in the treatment of baclofen overdose to increase ventilatory rate, blood pressure, heart rate and body temperature. Baclofen should be tapered gradually to avoid withdrawal syndrome manifesting as hallucinations, psychosis, seizures or even status epilepticus particularly if high dose are used.

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**REFERENCES**

