



ELSEVIER

respiratoryMEDICINE

## LETTER TO THE EDITOR

## Carbamazepine in asthma: First do no harm!

I read with interest the article by Lomia and colleagues wherein they have described the use of carbamazepine for treatment of moderate and severe persistent asthma.<sup>1</sup> However, there are two points regarding the study which need careful attention.

Firstly, patients with persistent asthma are often receiving treatment with theophylline or its analogs. In the current study also, more than two thirds of patients in each group were on oral theophylline. Carbamazepine has been shown to interact with theophylline and reduce the half life of the latter.<sup>2,3</sup> In patients with moderate-to-severe persistent asthma, such an effect can not only result in worsening of asthma control but also increase the risk of serious exacerbations, hospitalization and thus an increase in the morbidity (and possibly mortality) associated with asthma.

Secondly, carbamazepine itself has been associated with the development of a wide range of pulmonary disorders including pulmonary eosinophilia, diffuse parenchymal lung disease and even respiratory failure.<sup>4-7</sup> Occurrence of asthma has also been reported with the use of carbamazepine.<sup>8,9</sup> Since drug hypersensitivity has been the postulated underlying mechanism, patients have usually been managed with withdrawal of the drug and administration of corticosteroids, although severe cases, wherein administration of carbamazepine was associated with the development of respiratory failure, have required mechanical ventilatory support in addition to other measures.<sup>10</sup>

The authors' recommendation for the routine use of carbamazepine in persistent asthma on the basis of a single trial involving small number of patients in each group is at present, premature and unwarranted. It would be prudent to first evaluate the potential adverse effects associated with the use of carbamazepine in patients with persistent asthma by conducting randomized clinical trials (involving larger patient numbers) that are designed to test the safety profile of the drug rather than its efficacy. After all, in the practice of medicine, *non maleficence* precedes *beneficence*.

## References

1. Lomia M, Tchelidze T, Pruidze M. Bronchial asthma as neurogenic paroxysmal inflammatory disease: a randomized trial with carbamazepine. *Respir Med* 2006;**100**(11):1988-96.
2. Mitchell EA, Dower JC, Green RJ. Interaction between carbamazepine and theophylline. *N Z Med J* 1986;**99**(795):69-70.
3. Rosenberry KR, Defusco CJ, Mansmann Jr. HC, McGeedy SJ. Reduced theophylline half-life induced by carbamazepine therapy. *J Pediatr* 1983;**102**(3):472-4.
4. Orliaguet O, Langin T, Gavazzi G, Brambilla C. Acute eosinophilic pneumonia due to hypersensitivity to carbamazepine. *Rev Mal Respir* 1998;**15**(6):797-9.
5. Uji M, Sugama Y, Matsushita H. Carbamazepine-induced pneumonitis definitively diagnosed by accidental readministration. *Nihon Kokyuki Gakkai Zasshi* 2005;**43**(3):150-4.
6. Milesi-Lecat AM, Schmidt J, Aumaitre O, Kemeny JL, Moinard J, Piette JC. Lupus and pulmonary nodules consistent with bronchiolitis obliterans organizing pneumonia induced by carbamazepine. *Mayo Clin Proc* 1997;**72**(12):1145-7.
7. Ben Jemaa M, Kammoun S, Kanoun F, Zghal KM, Ben Hamed S. Respiratory manifestations of carbamazepine. Apropos of a case. *Rev Pneumol Clin* 1997;**53**(6):351-4.
8. Lewis IJ, Rosenbloom L. Glandular fever-like syndrome, pulmonary eosinophilia and asthma associated with carbamazepine. *Postgrad Med J* 1982;**58**(676):100-1.
9. Lee T, Cochrane GM, Amlot P. Pulmonary eosinophilia and asthma associated with carbamazepine. *Br Med J (Clin Res Ed)* 1981;**282**(6262):440.
10. Wilschut FA, Cobben NA, Thunnissen FB, Lamers RJ, Wouters EF, Drent M. Recurrent respiratory distress associated with carbamazepine overdose. *Eur Respir J* 1997;**10**(9):2163-5.

Navneet Singh

Department of Pulmonary Medicine, Postgraduate Institute of Medical Education and Research (PGIMER), Sector 12, Chandigarh 160012, India

E-mail address: navneetchd@yahoo.com