To the Editor:

We read the article by Belohlováková et al. (1), and we believe that some data from our and other research works would help in the understanding of the role played by fenfluramine and other serotonin [5-hydroxytryptamine (5-HT)]-releasing agents in pulmonary vasoconstriction.

In 1994, we presented the results dealing with the increased levels of catecholamines and 5-HT in the plasma during asthma attacks in children and adolescents (10). In 1996, we demonstrated that the increased levels of free serotonin (5-HT) in the plasma of symptomatic asthmatic patients were associated with clinical severity and pulmonary function (9). In 1998, we published two research papers showing that tianeptine (5-HT uptake enhancer drug), which reduces plasma 5-HT, provoked a dramatic and sudden decrease of both clinical rating and 5-HT plasma levels and an increase in pulmonary function (6, 7).

In 1999, Dupont et al. (3) demonstrated that 5-HT produced frequency- and concentration-dependent facilitation of cholinergic contraction in human airways in vitro. This facilitatory effect of 5-HT was partially mimicked by both selective 5-HT3 and 5-HT4 agonists. These findings suggested that 5-HT facilitates cholinergic contraction in human airways, implicating a role of 5-HT in asthma (3).

In January 2000, Cazzola and Matera (2) published an article dealing with the role played by 5-HT in asthma and other bronchial disorders.

In November 2000, we published a research paper showing that the administration of buspirone (a 5-HT1A agonist) provoked parasympathetic activation and increased free 5-HT in the plasma. This effect was blocked by atropine (5). The fact that buspirone worsened asthmatic patients and triggered asthma attacks is consistent with the above findings (4).

In addition to the above, we found that several types of pulmonary hypertension patients (vasculitis (1 case), primary pulmonary hypertension (1 case), chronic bronchitis (3 cases), chronic asthma (7 cases), and obesity (1 case)) who showed greatly raised 5-HT plasma levels were much improved by tianeptine administration and that clinical improvement paralleled normalization of plasma 5-HT levels (8), supporting the etiopathogenic role played by 5-HT plasma levels in both vascular and bronchial physiological disorders.

REFERENCES


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Fuad Lechin
B. van der Dijs
*Instituto de Medicina Experimental*
*Facultad de Medicina*
*Universidad Central de Venezuela*
Apartado 80.983
Caracas 1080-A, Venezuela
E-mail: flechin@telcel.net.ve