DUQUESNE UNIVERSITY
MYLAN SCHOOL OF PHARMACY

# PIC QUESTION OF THE WEEK: 3/26/07

Q: Can atypical antipsychotics cause stuttering?

A: Stuttering is a disturbance of normal speech and usually characterized by hesitations, repetitions, and/or prolongation of sounds and syllables. The person often displays anxiety about their lack of efficiency for oral communication. *Developmental* stuttering usually is present since childhood, while the *acquired* variety is associated with severe brain dysfunction secondary to malignancy, stroke, trauma, etc. Interestingly, a number of drugs have been implicated in the development of stuttering. These include lithium, theophylline, gabapentin, sertraline, fluoxetine, some tricyclic antidepressants, and the phenothiazines. The *second-generation* antipsychotic compounds are the most frequently cited cause of drug-induced stuttering. In one study, six cases of olanzapine-induced stuttering were identified among a large population of psychiatric patients. Risperidone has been implicated in rare cases as well; however, there are clearly more reports of stuttering induced by clozapine than any other *atypical* agent. Although a causal relationship between neuroleptics and the development of stuttering might be questionable in some reports, re-challenge was positive in several case descriptions. In most reports, stuttering developed after only a few days to weeks of initiating therapy and resolved within days after the drugs were discontinued. A variety of mechanisms have been proposed for this adverse reaction. Altered levels of dopamine, acetylcholine, and serotonin probably play some role in its development. It has been suggested that clozapine-induced stuttering may be associated with and precede seizure activity. In some cases, stuttering and EEG changes appeared to be directly related to higher doses of clozapine. Dosage of clozapine in some published reports ranged from 600-750 mg per day, but in others, the dose was only 300 mg daily. It has been suggested that pre-existing brain pathology plays a key role in the development of stuttering related to neuroleptics. It is noteworthy that some drugs identified as causes of stuttering have been used successfully to normalize speech in this disorder. These include the phenothiazines, haloperidol, and tricyclic antidepressants. Although stuttering is a rare complication of neuroleptic therapy, it should be considered, especially in patients with existing lesions of the central nervous system.

**References:**


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