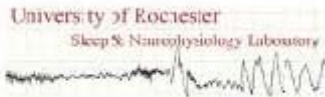


ANTIBIOTICS MAY BE INSOMNOGENIC



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INTRODUCTION

It is well established that medications which alter CNS neurotransmission may produce acute insomnia. The most common insomnogenic agents are SSRIs, beta adrenergic antagonists, alpha-2 adrenergic agonists, calcium channel blockers, corticosteroids, and adenosine antagonists. The extent to which insomnia may occur as a side effect of other classes of medications is less well known. In the present report, we call attention to data which suggest that antibiotics may be insomnogenic.

METHODS

A survey was undertaken using the Physicians' Desk Reference to document the occurrence of insomnia with seven classes of antibiotics including the cephalosporins (n=14), quinolones (7), penicillins (n=7), tetracycline (n=1), aminoglycosides (n=2), macrolides (n=4) and B-lactam (n=2) antibiotics.

RESULTS

While the occurrence of insomnia as an iatrogenic effect was found to be relatively uncommon (< 7% incidence), five of the classes were found to reliably have insomnia as a side effect: 100% of the quinolones, 57% of the penicillins, 50% of the B-lactam medications, 37% of the cephalosporins, and 25% of the macrolides have insomnia as a potential side effect. No such association existed for tetracycline and aminoglycosides. Insomnia occurred most reliably with the penicillin zosyn (6.6%) and the quinolone floxacin (3%).



DISCUSSION

These data suggest that antibiotics are not benign with respect to sleep and that they may serve as a precipitating factor for insomnia. Further research is needed to determine: 1) what factors predispose the individual to this particular stress-diathesis, 2) precisely what aspects of sleep continuity are affected (sleep initiation, maintenance, or both) and 3) how such medications, at a mechanistic level, result in sleep continuity disturbance. With respect to the last of these points, it has been suggested that antibiotics may cause delirium and/or seizures via the inhibition of GABA activity. A similar mechanism may be responsible for the occurrence of insomnia as a side effect, and particularly with the quinolones and zosyn.

