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ABUSE OF MONOAMINE OXIDASE INHIBITORS

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Abuse of monoamine oxidase inhibitors is not common but there are a few cases of addiction in the literature. Most of these patients had an additional diagnosis, either history of past drug abuse or personality disorder and MAOI withdrawal symptoms have been reported. We encountered three patients who received MAOI under psychiatric care. They were all self medicated by increasing the doses on their own, experienced euphoria and visited various physicians to obtain MAOI prescriptions and manifested toxic states. One of our patients had a normal, another a schizoid, and the third, an addictive personality. Two were addicted in the past to amphetamine. Therefore, it is important not to prescribe MAOI's to patients who have a history of amphetamine and other addictions.

Key words: Monoamine oxidase inhibitors, MAOI, Monoamine oxidase inhibitor addiction

INTRODUCTION

Monoamine oxidase inhibitors (MAOI) were introduced to psychiatry after Isonicotinic acid hydrazide, an antituberculous drug, was found to improve mood in patients suffering from tuberculosis (Selikoff, 1952). Among the many MAOI that were introduced to the market only two, phenelzine and tranylcypromine, have been found to be clinically useful antidepressants with a relatively good safety profile. However, recently, reversible monoamine A inhibitors have become available in the market.

The popularity of these drugs in psychiatry has been up and down. Initially, they were found to be useful in the treatment of neurotic depression and in phobic anxiety states, while the tricyclics were reserved for the treatment of major depression. During the 1970's they fell into disrepute because of their suspected low efficacy and the danger of hypertension. However, later work (Pare, 1985; Robinson, 1978) has shown them to be as effective as tricyclic antidepressants. Additionally, they have also been found to be useful in the treatment of eating and panic disorders and anxiety states (Mountjoy et al, 1977; Walsh et al, 1982).

While the side effects of these drugs and food restrictions necessary to take them have been limiting factors for their use thus far, the introduction of reversible inhibitors of monoamine oxidase A may facilitate their clinical use. The side effects profile of these drugs is well delineated (Kurtz & Robinson, 1988). The most publicized and the most dangerous side effect is hypertension while the common ones are insomnia, hypotension, sexual side effects, weight gain and occasionally mania.

Abuse of these drugs in not common but there are thirteen cases of addiction in the literature (Baumbacher & Hansen, 1992; Ben-Arie & George, 1979; Griffin et & Webb, 1981; Le Gassicke, 1963 & 1965; Mielczarek & Johnson, 1963; Shopsin & Kline, 1976; Swanson et al, 1973; Vartzopoulas & Krull, 1991; Westermeyer, 1989; Pitt, 1974). Of these, seven men and five women were addicted to tranylcypromine, while only one patient (male) was addicted to phenelzine. Most of these patients had neurotic depression and ten of them had an additional diagnosis either history of past drug abuse or personality disorder (Shopsin & Kline, 1976). It is possible that the euphoric effect of tranylcypromine may contribute to addiction or abuse. MAOI withdrawal symptoms, such as headache, shivering, and intense cold, lasting for a week have been reported (Tyrer, 1984).

We encountered three patients who received MAOI under psychiatric care. They were all self medicated by increasing the doses on their own, experienced euphoria, visited various physicians to obtain MAOI prescriptions, and manifested toxic states. These reports may be of interest to clinicians who prescribe MAOI in their clinical practice.

CASE REPORTS

Case 1: This fifty four year old Caucasian professional male was admitted to a hospital on three different occasions within a period of three months with transient hypertension and euphoria, resolving each time after brief hospitalization. His symptoms were headache, numbness and tingling, and sensory loss in different part of the body. Extensive work up did not reveal any abnormality. During his fourth admission, his blood pressure reading was 180/110, with mild euphoria and lack of concern about his

physical state. A neurological examination and laboratory data were within normal limits. Due to the difficulty posed by the clinical picture in arriving at a diagnosis, psychiatry was consulted.

During psychiatric examination, he admitted seeing a psychiatrist for depression during the previous four years. As he failed to respond to adequate tricyclic therapy, tranylcypromine 20mg daily was prescribed. It lifted his mood, anergia and fatigue. As the euphoric effect wore off over time, he obtained medications from different physicians and gradually increased the dose. At the time of admission, he had been taking 200 to 400 mg of tranylcypromine daily. The patient had functioned well as a professional and had no prior addictions. Mental status examination revealed euphoria, mild irritability, and headache. No hallucinations or delusions were observed. Preoccupation or craving for the drug were notably absent. On the unit, tranylcypromine 20 mg was prescribed and he was watched carefully. He signed out, against medical advice, a week later.

Case 2: A thirty five year old separated Caucasian female was admitted to the emergency unit of a general hospital experiencing confusion, visual hallucinations, irritability, psychomotor excitement and severe hypotension. As an overdose was suspected, careful monitoring and supportive therapy were instituted. After 48 hours, her blood pressure improved and confusion was partially lifted. She was admitted to psychiatry with a diagnosis of major depression. On examination, she was oriented to place and person but not to time, irritable, belligerent and confused. She admitted to taking an excessive amount of phenelzine to "feel good". She did not mind feeling dizzy as long as she felt high. The symptoms abated over a period of two weeks. She had many past admissions with a diagnosis of major depression, substance abuse and personality disorder. Phenelzine was withdrawn, but the patient continued to crave for this medication.

Case 3: This fifty four year old male was severely depressed following his recent divorce. He had had many episodes of depression along with schizoid personality unresponsive to adequate dose of tricyclics, with and without thyroid and lithium supplementation. Subsequently, amphetamine had been prescribed with reasonable improvement. He abused amphetamine for years. As the patient continued to have depression, inability to communicate with people and irritable outbursts, amphetamine was discontinued and tranylcypromine 20 mg daily was prescribed with a good clinical response. Over time, the patient started increasing the dose on his own by obtaining prescriptions from a number of psychiatrists. He was subsequently admitted to the hospital with tremulousness, tachycardia, shivering, perspiration and aches and pains all over the body. During the interview, it was revealed that he had been taking 100 to 160 mg of tranylcypromine daily. Two weeks after 20 mg daily of tranylcypromine in the hospital, all his depressive symptoms were resolved but the patient continued to be socially withdrawn.

DISCUSSION

Various adverse effects of MAOI's are well established, but withdrawal as well as addiction are rarely reported. The literature indicates that those who were addicted to amphetamine or other drugs in the past, are at increased risk to become addicted to a MAOI. One of our patients had a normal, another a schizoid, and the third, an addictive personality. While two of our patients were addicted in the past to amphetamine, all the three experienced a good antidepressant response with euphoria. The fact that these patients actively sought medication for years in spite of dangerous side effects indicates addiction rather than dependence. Also of interest is the phenelzine addiction in one of our patients. Such an addiction is rarely reported in the literature.

Hence, it is important not to prescribe MAOI's to patients who have a history of amphetamine and other addictions. Even though MAOI addiction is a rare occurrence, such a precaution is relevant, as the use of these medications is on the increase. A careful scrutiny is called for when patients on MAOI's ask for an increase in dose, develop hypotension or hypertension, or manifest toxicity. Otherwise, they may go unrecognized as occurred in one of our patients.

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