Neuroleptic Induced Incontinence - Case Report

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Tabasum Alvi, Hashim Reza (Department of Psychiatry, Aga Khan University Hospital, Karachi.)

Introduction

Urinary incontinence is an uncommon complication of neuroleptic treatment. When it occurs itis very distressing and disabling for the patieni Renshaw[1] reported 4 patients over 60 years of age and 2 under 7 years who developed urinary incontinence, both day and night, on thioridazine. It stopped 3 days after stopping thioridazine and there was no recurrence when other phenothiazines were used. A non-overflow stress incontinence has been described by Van Putten et al[2] in 3 patients heated with thioridazinc, chlorpromazine (CPZ) and irifluoperazine. Shaikh[3] reported 4 women, all below 35 years, who were enuretic, mostly at night, within 7 days of depot phenothiazines, 3 on fluphenazine, 1 on flupenthixol. This stopped when treatment was withdrawn and reappeared when it was restarted. Nurnberg and Ambrosini[4] reported 5 eases, 3 men, 2 women, aged 18-33 years, who developed urinary incontinence in 3-15 days on variable doses of haloperidol, CPZ and fiuphenazine. The incontinence occurred and remitted spontaneously after beginning neuroleptic treatment and the complaint tended to stabilize if drug was continued. No patient experienced feeling of urge, dribbling or stress related loss. Shenoy[5] reported cases of two men, 29 and 30 years old, who developed nocturnal enuresis on thioridazine within 1-7 days of starting treatment. It disappeared after the medication was discontinued and reappeared when medication was given again, upto a year later. Jose[6] also reported two men, aged 64 and 66, who developed urinary incontinence while taking thioridazine in relatively small doses of 50-150 mg daily. Crittenden[7] described the case of a 49 years old man on thiorithzine who became enuretic and incontinent at night and during day naps.

Case Report

A 32 years old woman with 12 years history of schizophrenia, paranoid type, was admitted from the Emergency room of the Aga Khan University Hospital with exacerbation of delusions of persecution and grandiosity, agitation and disturbed sleep since 3 days. She had previously been treated with several psychotropics including CPZ, haloperidol, trifluoperazine, fluphenazine decanoate, zuclopenthixol decanoate, amitriptyline, lithium carbonate and lorazepam although she had not been very compliant with medication and follow-up arrangements. The longest continuous period of medication was for two years, 1989-1991, when she was on haloperidol 20mg daily, CPZ 75 mg daily and fluphenazine decanoate 50 mg fortnightly. She tolerated these medicines well with partial benefit. She had also been given 10 ECTs in 1980 and zuclopenthixol decanoate 200 mg fortnightly foran unknown period in 1987. She had no significant past medical history, in particular there was no history of genito-urinary problems, enuresis or urinary incontinence. Her physical examination at the time of admission was unremarkable. Prior to her admission she had intermittently been taking haloperidol 20mg, CPZ 150 mgand diazepam 5 mg daily for a few weeks. She had afew tolerable side effects, namely blurring of vision, constipation and dizziness. On the second day of admission haloperidol and diazepam were discontinued with the objective of simplifying her prescription and CPZ was increased to 500 mg daily in divided doses. When this failed to help her insomnia and agitation, CPZ was further increased to 700 mg daily by the fifth day of admission. She also received her depot antipsychotic, fluphenazine decanoate 25 mg, on the third day of admission. After 4 days of increased CPZ dose, 5 days after the depot, she developed urinary incontinence. A day earlier she had been given an extra

dose of CPZ 100 mg taking the total daily dose to 800 mg. She was not receiving any anticholinergic agents during this period except for a single dose of trihexyphenidyl 2 mg given several days before the onset of incontinence. There were 4 episodes of urinary incontinence all occurring during the day. She passed a few drops of urine without prior warning or an urge to void. This was extremely distressing for her. CPZ was discontinued immediately and she was put on diazepam 4 mg daily to control her agitation. The urinary complaint disappeared within 24 hours of its onset. It did not recur despite continuing her weekly depot and substituting CPZ with trifluoperazine 20 rug daily. She was discharged from hosptial 3 days later to be followed up in the out-patient clinic. She received two further weekly doses of the depot antipsychotic without recurrence of side-effects before dropping out of follow-up.

Discussion

It is generally well recognised that phenothiazines cause classical anticholinergic side effects which predominate over their other peripheral side effects of a-adrenergic and cholincrgic blockade which could lead to urinar incontinence through different mechanisms: bladder sphincter relaxation or paralysis. retention and overflow. Almost all antipsvchotics. including CPZ. chiorprothixine, fluphenazine. haloperidol. pimozide. thiothixine and trifluoperazinc, have been reported to cause urinary incontinence or nocturnal enuresis. Thioridazine alone has been implicated in atlcast 12 cases although high doses of this antipsychotic have also been used to treat urinary incontinence[8]. Typically, the incontinence isa nocturnal event, not of the overflow or stress variety and limited in its duration. It can however occur at any time of the day or night. It tends to occur within hours or sporadically over the first several weeks regardless of the patient's previous genitourinary condition. It tends to diminish with continued neuroleptic administration or follows an on-off pattern when the drug is discontinued[9]. Most authors have reported successfully substituting the incriminated antipsychotic with another. Crittenden[2] substituted diazepam for thioridazine with equally successful outcome. Our case was atypical in that the episodes of incontinence occurred during the waking hours and lasted for less than a day. Otherwise, it had all the other usual features, it was not of overflow or stress variety and occurred while the patient was on the same drugs. She had previoush' been given several times without an adverse event. She had never been given CPZ at such a high dose before which made it the likely culprit. Sudden improvement was seen alter its discontinuation and no recurrence occurred after two further doses of fluphenazine decanoate. In view of the severe distress caused to the patient, it was decided not to rechallenge her with CPZ.

Various hypotheses have been proposed to explain this uncommon side effect. Renshaw[1] proposed that phenothiazinc induced incontinence may be due to an overflow incontinence secondary to the anticholinergic effect of reduced bladder tone, which allows for increased bladder volume and increased urinary retention. This observation was based on all her patients having developed this side effect on thioridazine which is the most anticholinergic of all phenothiazines. Contrary to this, Jose[6] and Dainow[10]

suggested use of anticholinergics to control urinary incontinence. Van Putten et al[2] postulated that a-adrenergic blocking properties of the phenothiazines induce internal urinary sphincter relaxation in anatomically predisposed women. This mechanism occasionally causes retrograde ejaculation in men taking the drug. Shenoy's case report[5] of young men with adequate sexual function refutes this explanation as does the observation that thiothixine, an antipsy choic with low a-adrenergic blocking activity, causes enuresis. He argued that psychotropics cause fragmentation of REM sleep and a relative prolongation of non-REM sleep which increased the chances of developing enuresis. He also proposed that psychotropic induced dryness of mouth resulting in increased fluid intake might give rise of

physiologic çpolvuria and nocturnal enurcsis. Nurnberg and Ambrosini[5-9]. ,ernphasizing the effects of butyrophenones and phenothiazines related compounds on dynamics of central biogenic amine neurotransmitter SV stems. have argued for centrally mediated bladder disturbance. They quoted reports of incontinence in disturbances of the brain stern, basal ganglia and frontal lobes in support of this hypothesis. Anticholinergic compounds did not seem to influence directly the incontinence in those of their cases in wiuch they were used for control of mild extrapy ramidal side effects. However, incontinence as a variant of an extrapy ramidal syndrome was not ruled out. In our opinion, the exact mechanism of urinary incontinence caused by antipsychotic use remains poorly understood. In view of its distressing nature it should be recognised early with discontinuation or reduction in dose of the suspected medicine. Adding diazepam or anticholinergic agents could also be helpful. In some cases the problem tends to stabilise despite continuing the incriminated medicine.

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