

# URINARY INCONTINENCE IN ACUTE PSYCHOSIS

S. CHOUDHURY, M. AUGUSTINE

## SUMMARY

*A prospective two year study of consecutive admissions (n=984) to a psychiatry ward revealed that the incidence of temporary urinary incontinence in psychiatric patients without delirium or dementia was 1.63% (n=16). When compared with controls (n=64) the incontinent patients were more often psychotic, gave a history of childhood enuresis and a past history of temporary incontinence during psychosis. Compared with psychotic controls (n=26), incontinent patients (n=16) had been exposed to a greater variety of treatments and were hospitalized for longer periods.*

## INTRODUCTION

Temporary urinary incontinence is a common finding in patients with delirium or dementia. However, it is not uncommon in other acutely psychotic patients even in the absence of delirium or dementia. The occurrence of temporary urinary incontinence in acute psychosis without delirium or dementia is usually explained in terms of disinhibited behavior, negativism, stupor, psychotic disorientation, aggression or psychodynamic regression. Advances in biological psychiatry have highlighted the importance of central neurotransmitter dysfunction (Ambrosini, 1984), medication (Van Patten et al, 1973; Numberg & Ambrosini, 1979) and medical history (Berrios, 1986). There has been, to the best of our knowledge, only one prospective study of this phenomenon (Berrios, 1986) and no study has been carried out in India. This prompted us to undertake a prospective study of temporary urinary incontinence in acute psychotic patients without delirium or dementia.

## MATERIAL AND METHODS

This prospective study was carried out in a 40 bed psychiatric center of a large base hospital from 01 March 1990 to 29 Feb 1992. There were 984 admissions to the psychiatry ward during the period of study. Patients meeting the following inclusion criteria were selected for the incontinent group:

1. At least three episodes (diurnal or nocturnal) of urinary incontinence defined as "involuntary loss of urine constituting a social or hygienic problem" (Issacs & Walkey, 1964).
2. The three episodes must have occurred within a period of 48 hours.
3. Absence of senile and presenile organic psychosis, transient organic psychosis and other organic psychosis (ICD-9 categories 290, 293 and 294).

A control group of patients were selected from the total cohort (n=984). As soon as a patient met the criteria for urinary incontinence, four other patients were chosen as his controls from among fellow patients who met the following criteria:

1. Admission date no more than one week before or after that of the incontinent patient.
2. No clinical evidence of senile, presenile and other organic psychosis, transient organic psychosis and other organic psychosis (ICD-9 codes 290, 293 & 294).

If more than four patients met the above criteria, the four control patients were selected randomly. A specially designed proforma to elicit general demographic information, medical history, psychiatric history, physical and psychiatric examination, treatment and outcome was completed for all the incontinent patients and controls. Diagnosis was made as per ICD-9. All patients underwent the following investigations: routine hemogram, urinalysis, liver function tests, blood urea, blood sugar (fasting and post-prandial), serological test for syphilis, skull radiograph and funduscopy (only in psychotic patients).

## RESULTS

Out of 984 patients in our study, 16 (1.63%) patients exhibited a temporary urinary incontinence as per the inclusion criteria. All these patients were suffering from

TABLE 1  
Psychiatric Diagnosis of Incontinent Patients Compared with Controls

ICD-9 diagnosis	Incontinent (n=16)	Controls (n=64)	X <sup>2</sup>	Significance
<b>Psychotic Disorders</b>	16	26	15.79	p < 0.01
Alcoholic hallucinosis (291.3)	1	3	0.15	NS
Drug Psychosis (292)	-	1	0.57	NS
Catatonic schizophrenia (295.2)	4	4	3.13	NS
Paranoid schizophrenia (295.3)	3	6	0.36	NS
Schizoaffective type (296.7)	1	-	0.57	NS
MDP, manic type (296.0)	4	6	2.26	NS
MDP, depressed type (296.1)	3	6	0.36	NS
Other nonorganic psychoses (296)	-	1	0.57	NS
<b>Non-psychotic Disorders</b>	-	38	-	-
Anxiety states (300.0)	-	9	-	-
Hysteria (300.1)	-	4	-	-
Neurotic depression (300.4)	-	6	-	-
Other neurotic disorders (300.8)	-	2	-	-
Impotence (302.7)	-	4	-	-
Alcohol dependence (303)	-	9	-	-
Adjustment reaction (309)	-	4	-	-

NS = Not Significant

**TABLE 2**  
Clinica Features and Treatment of Incontinent Patients compared with Psychotic Controls

	Incontinent (n=16)	Psychotic controls (n=26)	$\chi^2$	Significance
Hallucinations	8	11	0.23	NS
Delusions	15	21	0.51	NS
Depression	5	8	0.10	NS
Retardation	4	7	0.05	NS
Suicidal ideation	5	3	1.38	NS
Agitation	5	9	0.01	NS
Stupor	5	2	2.44	NS
Disinhibition	3	4	0.02	NS
Hyperactivity	6	6	0.43	NS
Elation	4	5	0.00	NS
Past history of psychosis	5	4	1.63	NS
Family history of psychosis	3	6	0.00	NS
Period (days) of hospitalization	71.9	53.8	2.45(t)	<0.05
Number of patients treated with				
Chlorpromazine	10	12	1.06	NS
Trifluoperazine	4	3	0.50	NS
Haloperidol	6	5	0.89	NS
Tricyclic anti-depressants	3	7	0.05	NS
Benzodiazepines	4	5	0.00	NS
ECT	12	12	3.36	NS

**TABLE 3**  
Mean Dosage of Drugs (mg/day) and Mean Number of ECTs for Incontinent Patients and Psychotic Controls.

Treatment	Incontinent patients (n=16) Mean (SD)	Psychotic controls (n=26) Mean (SD)	t	Significance
Chlorpromazine	380.0 (140.0)	325.0 (82.9)	1.14	NS
Trifluoperazine	25.0 (9.1)	21.7 (7.6)	1.01	NS
Haloperidol	25.8 (6.7)	23.0 (5.7)	0.85	NS
Tricyclic anti-depressants	333.3 (47.1)	300.0 (0.0)	1.67	NS
Lithium	900.0 (0.0)	900.0 (0.0)	0.0	NS
Benzodiazepines	30.0 (0.0)	30.0 (0.0)	0.0	NS
ECT	7.6 (1.4)	6.7 (1.0)	1.29	NS
TTS <sup>a</sup>	2.44	1.65	2.25	<0.05

TTS: total treatment score is the sum of the patients individual treatment scores (1 point for each drug or ECT).

psychosis. The control group consisted of 64 patients, 26 of whom had psychotic disorders. The mean age of the incontinent patients was 31.4 years (range 21-48) and the mean age of controls was 34.0 years (range 22-50); the

difference in age was not statistically significant. There was also no difference between the incontinent and the control groups in the prevalence of medical illnesses like hypertension (0 vs 1), alcoholic hepatitis (1 vs 2), bronchitis (1 vs 0) radiculopathy (1 vs 0) and orthostatic hypotension (3 vs 4). However, the incontinent group included a significantly higher proportion of patients with a history childhood enuresis (5 vs 4;  $p < 0.05$ ), previous history of adult incontinence (3 vs 0;  $p < 0.05$ ) and a higher proportion suffering from psychotic disorders (16 vs 26;  $p < 0.01$ ).

The 64 control patients consisted of 26 with psychoses and 38 patients with neuroses and other disorders. Comparison of this psychotic subgroup with the incontinent sample revealed no difference in the distribution of diagnosis (Table 1), number of past episodes of psychosis or family history of psychotic disorders, nature of symptomatology, type of treatment received (Table 2) or the dose of drugs or ECT (Table 3). However, incontinent patients had significantly longer duration of hospitalization (Table 2) and had received a significantly greater variety of treatments (Table 3). There was a trend for the incontinent group to receive larger doses of drugs and ECT but the differences were not statistically significant (Table 3). None of the patients had urinary tract infection, and there was no evidence of organic etiology, delirium or dementia in any of the cases.

All the control patients recovered from their psychiatric disorder. Fifteen of the sixteen incontinent patients had recovered from both their psychoses and urinary incontinence at the time of discharge from hospital. The remaining one patient with incontinence had also recovered, but during the sixth week of hospitalization developed chicken pox and subsequently died of varicella pneumonia.

## DISCUSSION

Urinary incontinence in adults usually implies organicity. In fact, standard Neurology text books (Adams & Victor, 1985; Walton, 1985) do not even mention psychosis among the causes of urinary incontinence. However the findings of the present study, in agreement with Berrios (1986), clearly indicate that episodes of urinary incontinence are not rare findings in acutely psychotic patients, even in the absence of delirium or dementia.

Another important finding is that psychotic patients are significantly more likely to develop temporary urinary incontinence as compared to nonpsychotic patients. The type of psychotic disorder does not seem to be an important factor. However, the significantly longer period of hospitalization and the significantly higher total treatment score clearly indicate that it is the severity of psychosis which is responsible for the temporary disorder of micturition. This is further confirmed by the absence of an organic cause and the fact that the incontinence disappeared with recovery from psychosis.

The aetiology of temporary urinary incontinence during acute psychosis remains unknown. Developmental

delays in the acquisition of control of micturition due to genetic influences have been mentioned as a major vulnerability factor (Berrios, 1986). In agreement with this, we have also found that incontinent patients gave a significantly higher incidence of childhood enuresis.

Few workers have highlighted the role of neuroleptics (Von Patten et al, 1973; Nurnberg & Ambrosini, 1979; Ananth et al, 1971), suggesting that the central control of micturition depends upon a noradrenergic-dopaminergic balance, with dopamine agonists increasing control, and antagonists increasing the likelihood of incontinence in predisposed individuals. An association between thioridazine and increased incidence of urinary incontinence in psychiatric patients has been observed (Ananth et al, 1971; Berrios, 1986). Why thioridazine should have a more marked effect than other neuroleptics is unclear (Berrios, 1986). As none of our patients received thioridazine, this could not be confirmed. Orthostatic hypotension has also been mentioned as a concomitant symptom of urinary incontinence, but our study in agreement with Berrios (1986), showed no difference in this regard between the incontinent and control groups.

In conclusion we can state that the temporary urinary incontinence in acute psychosis without delirium or dementia is due to the severity of the psychotic disorder in an individual genetically predisposed to enuresis. The symptom does not necessarily imply organicity and has a good prognosis. The effect of drugs in the causation of this disorder require further evaluation.

## REFERENCES

- Adams, R.D. & Victor, M. (1985) *Principles of Neurology*, 3rd edn. New York: McGraw-Hill.
- Ambrosini, P.J. (1984) A Pharmacological paradigm for urinary incontinence and enuresis. *Journal of Clinical Psychopharmacology*, 4, 247-253.
- Ananth, J.V., Ban, T.A. & Lehman, H.E. (1971) Urinary incontinence in patients receiving neuroleptics. *Journal of Clinical Psychiatry*, 104, 326-328.
- Berrios, G.E. (1986) Temporary urinary incontinence in acute psychiatric patients without delirium or dementia. *British Journal of Psychiatry*, 149, 326-328.
- Issacs, B. & Walkey, D.A. (1964) A survey of incontinence in elderly hospital patients. *Gerontologia Clinica*, 6, 367-375.
- Nurnberg, H.G. & Ambrosini, P.J. (1979) Urinary incontinence in patients receiving neuroleptics. *Journal of Clinical Psychiatry*, 40, 271-274.
- Von Patten, T., Malkin, M.D. & Weiss, M.S. (1973) Phenothiazine induced stress incontinence. *Journal of Urology*, 109, 525-526.
- Walton, J. (1985) *Brain's Diseases of the Nervous System*, 9th edn. Oxford: Oxford University Press.
- World Health Organisation (1978). *Mental Disorders: Glossary and Guide to their classification in accordance with the 9th revision of the International Classification of Diseases*. Geneva: W.H.O.

S.Choudhury\*, Psychiatrist; M.Augustine, Specialist Sister (Psychiatry), 151 Base Hospital, C/O 99 APO.

\*Correspondence