

THE PISA SYNDROME

[PLEUROTHOTONUS]

Dystonic syndrome:

First described by Ekblom (Germany) in 1972 as a side effect of neuroleptic treatment in 3 elderly women taking haloperidol

Criteria:

Tonic flexion of the trunk to one side or also seen as a leaning backward as well--patients unable to stand straight!

Accompanied by a slight rotation

Remarkable indifference to grossly abnormal posture

Current neuroleptic (or antidepressant) treatment

Multiple reports in medical literature

Prevalence unknown in general clinical practice unknown

A number of case reports

No systematic study except: Yassa, et.al. *Biol Psychiat* 1990;29:942-45

All newly admitted psychogeriatric patients examined over a 5 year period:
Psychogeriatric Dept. of Douglas Hospital, Verdun, Quebec, Canada

133 patients: 47 men, 86 women—first time admissions

11 patients developed the Pisa syndrome (8 women, 3 men)
2-120 days after neuroleptics started

Prevalence rate of 8.3% (9.3% in women, 6.4% in men)

Ages: 65-80

All were given anticholinergic medication—not effective, caused confusional states in 2 patients

Only effective remedy: reducing or discontinuing the neuroleptic!

Neuroleptics used at this Canadian hospital included haloperidol, (7 cases), moditen—fluphenazine (2 cases), chlorpromazine (2 cases).

2 patients had concomitant drug-induced Parkinsonism

2 patients also had idiopathic Parkinsonism

7 patients—no other movement disorder

Etiology?

Guy (1986): a manifestation of tardive dystonia (?)

But, it disappears when the offending medication is stopped

Suzuki, et.al. (1997) *Biol Psychiatry* 41:234-236

Little is known about the pharmacologic mechanism underlying this syndrome

Dopaminergic dysfunctions have been implicated

Role of serotonergic or noradrenergic mechanism also suggested

58 year-old Japanese man with depression

Treated with amitriptyline, imipramine and nortriptyline

Tilted to the right, flexed toward right shoulder

He was indifferent to this posture

Biperiden given, symptoms disappeared

5-HT-DA interactions?

Neuropathology is probably complicated

Padberg et.al. (1998) *British J Psychiat* 173(10):351-2

Reported a case of Pisa syndrome with sertindole treatment

85 year-old woman with acoustic hallucinations and agitation

After 10 weeks of treatment—leaning backwards and to the right

Indifferent to markedly abnormal posture

Reduction in dose—all signs disappeared

Kurtz, et.al. (1993) *Nervenarzt* 64(11):742-6

Four woman, chronic schizophrenia, taking clozapine

In 324, not a rare problem—not nearly as uncommon as one would expect from the small number of cases reported

I saw my first case about 1972 in an elderly woman taking haloperidol

More recently, over the past 4 years, I've seen a number of cases in 324

Sertraline—elderly Japanese man, leaning backwards

Sertraline—one Caucasian man in the past year in 324

Trazodone—one Caucasian man in the past year in 324

Risperidone—one Native American man in the past year in 324