

were knee jerks and plantar responses. Ankle jerks were unobtainable. Romberg's sign was strongly positive and gait was unsteady and broad-based with a tendency to fall forwards. There was tenderness over both Achilles tendons, in which defects could be felt about 3 cm proximal to the calcaneal insertions. Passive dorsiflexion of the ankles was possible to 30° beyond the neutral position and plantar flexion failed to occur on calf compression.

The following investigations were normal or negative: X-rays of spine, ankles and chest, full blood count, ESR, glucose tolerance test, serum electrolytes and bone profile, fasting lipid profile, and antinuclear and rheumatoid factors.

It was concluded that her entire clinical picture was due to bilateral spontaneous rupture of her Achilles tendons. Because of the duration of the history, her steroid therapy, and the retention of some plantar flexion ability, she was treated conservatively with light short leg casts (Baycast) in equinus which permitted satisfactory and painless mobility. These were removed after five weeks and it was found that her gait was considerably more steady although ankle plantar flexion was still weak. Her oral steroids were reduced slowly with a concomitant increase in her other medication and without deterioration in her asthma.

Discussion

Bilateral Achilles tendon rupture has been reported as a complication of corticosteroids given either by local injection¹ or orally. In the latter instance it has been suggested that the primary disease process being treated, for example systemic lupus erythematosus², is the most important aetiological factor. This

seems unlikely as several cases of rupture have been documented in which patients were taking long-term oral steroids for respiratory disease without demonstrable connective tissue disease^{3,4}. Degenerative changes are normally found in Achilles tendons after the third decade⁵ and corticosteroids presumably cause rupture through suppression of repair mechanisms, so that apparently spontaneous rupture will occur after minimal trauma not noticed by the patient.

Previous reports of bilateral Achilles tendon rupture following steroid therapy describe pain as the major symptom, in contrast to our patient who had minimal discomfort but marked unsteadiness of gait. In conclusion, we suggest that difficulty in walking or the finding of 'neurological' signs in a patient on steroid therapy should lead to consideration of this unusual orthopaedic complication.

References

- 1 Unverforth LJ, Olix ML. The effect of local steroid injections on tendons. *J Bone Joint Surg* 1973;55A:1315
- 2 Potasman I, Bassan HM. Multiple tendon rupture in systemic lupus erythematosus: case report and review of the literature. *Ann Rheum Dis* 1983;43:347-9
- 3 Haines JF. Bilateral rupture of the Achilles tendon in patients on steroid therapy. *Ann Rheum Dis* 1983;42:652-4
- 4 Baruah DR. Bilateral spontaneous rupture of the Achilles tendons in a patient on long term systemic steroid therapy. *Br J Sports Med* 1984;18:128-9
- 5 Hastad K, Larsson LG, Lindholm A. Clearance of radio-sodium after local deposit in the Achilles tendon. *Acta Chir Scand* 1958;116:251

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Psychiatric side effects of bromocriptine therapy for postpartum galactorrhoea

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Keywords: bromocriptine; bipolar disorder; psychosis, organic; galactorrhoea, postpartum

The psychiatric side effects of long-term, high-dosage bromocriptine treatment for parkinsonism are well known. We report a young woman with no history of affective disorder who required compulsory admission for a bipolar disorder associated with bromocriptine therapy for postpartum galactorrhoea. General practitioners and midwives should be aware of the possible psychiatric side effects of bromocriptine therapy.

Case report

A 30-year-old woman was compulsory admitted under the Dutch mental health act and diagnosed as having a puerperal psychosis 15 days after the rapid delivery of her first pregnancy.

After delivery, therapy with bromocriptine 2.5 mg twice-daily had been initiated to stop galactorrhoea. Thereafter she slept little, became restless and uninhibited, talked day and night and was continually active and sometimes verbally aggressive. She had the magical idea that by talking about problems a bad ghost would escape from her. She refused voluntary admission and locked herself up in a room with the baby and, when coming out, was involuntarily admitted. There was no history nor family history of psychiatric pathology.

On admission she was slightly agitated, restless, talkative and easily distractable. Her thinking was quick and associative, her mood changed from euphoric to dysphoric, and she had preoccupations with going home. She was busy with her make-up and fingernails. Insight into her situation was lacking. Other examinations were normal.

The diagnosis of an atypical bipolar disorder was made, since the full manic spectrum was not present (DSM-III). Therapy with bromocriptine was stopped and an uneventful recovery occurred within one week. Follow up after discharge revealed no pathology.

Discussion

Bromocriptine is used in the treatment of a variety of disorders including Parkinson's disease, pituitary pathology, postpartum galactorrhoea and tardive

dyskinesia. The adverse reactions have been classified according to whether they occur on starting therapy or during long-term therapy. Psychiatric side effects are known to occur during long-term therapy in patients with parkinsonism¹. Two previous reports have described psychiatric side effects in patients without parkinsonism. In one patient with a pituitary adenoma, the clinical presentation differed from that in our patient and consisted of a schizophreniform picture typical of bromocriptine-related psychosis². In a study of the response to bromocriptine in bipolar and unipolar depression³, all the bipolar patients improved within the first week; however, one absconded while in a mild manic phase and a second developed frank manic symptoms. These patients therefore belonged to the bipolar III category of Klerman⁴ – a bipolar disorder induced by treatment of a depressive syndrome. Though formerly suggested as a treatment for mania⁵, bromocriptine was found in a double-blind trial to have no demonstrable effect⁶, which would be expected since it is dopamine-blocking agents that are effective in mania.

It may be no coincidence that the patient described is a young woman. In women oestrogens sensitize dopaminergic neurons and women seem more sensitive to dopamine-blockers⁷. Moreover, an age-related decline in dopamine receptors has been demonstrated, which is more rapid for men than women⁸.

General practitioners and midwives should be aware of the risks of psychiatric side effects of bromocriptine therapy so that the possible harmful consequences might be prevented.

References

- 1 Thorner MO, Flückiger E, Kalne DB. *Bromocriptine, a clinical and pharmacological review*. New York: Raven Press, 1980
- 2 Shukla S, Turner WJ, Newman G. Bromocriptine-related psychosis and treatment. *Biol Psychiatry* 1985; 20:326–8
- 3 Silverstone T. Response to bromocriptine distinguishes bipolar from unipolar depression. *Lancet* 1984;i:903–4
- 4 Klerman GL. The spectrum of mania. *Compr Psychiatry* 1981; 22: 11–20
- 5 Colonna L, Petit M, Lepine JP. Bromocriptine in affective disorders. *J Affective Disord* 1979; 1: 173–7
- 6 Smith AHW, Chambers C, Naylor GJ. Bromocriptine in mania. A placebo-controlled double-blind trial. *Br Med J* 1980; 280: 86
- 7 Bateman DN, Rawlins MD, Simpson JM. Extrapyramidal reactions with metoclopramide. *Br Med J* 1985;291: 930–2
- 8 Wong DF, Wagner HN, Dannals RF *et al*. Effects of age on dopamine and serotonin receptors measured by positron tomography in the living human brain. *Science* 1984; 226:1393–6

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Meeting reports

Report of meeting of Forum on Maternity & the Newborn, 25 February 1986

Care in labour – a need for reassessment

Keywords: labour; continuity of care; women's views; role of midwives

Chairing the twelfth meeting of the Forum, Ms Caroline Flint (Research Midwife, St George's Hospital, London) welcomed members of the audience collectively and as representatives of their various professions.

As first speaker, Mr Philip Steer (Senior Lecturer and Honorary Consultant at St Mary's Hospital, Paddington) began by acknowledging that care in labour was always in need of reassessment, so that professionals could adapt to changes in medical knowledge and technology as well as changes in the systems of caregiving and in the place in which care was given.

Changes in expectation

The main change with which Mr Steer was concerned was in the expectations of the users of the maternity services. To illustrate this he considered the entries in the birth register belonging to the midwife who

had delivered his own mother (at home), made at the time when the national perinatal mortality rate (PNMR) was 37/1000. He felt his mother's reaction to the number of stillborn babies, born to women known to her, was typical of her generation when such things were accepted as facts of life and no one thought to apportion blame. Women giving birth in 1985, when the PNMR was 9.6/1000, had a much greater expectation of a live, healthy child and were much more likely to look for someone to blame if the outcome was not optimal. A PNMR of 9.6/1000 meant that one in every hundred couples lost their baby after 24–28 weeks gestation, affecting a total of 680 couples in 1985.

The person most likely to be blamed for an adverse outcome was, in his experience, the obstetrician. However, he quoted several studies^{1–4} demonstrating that mental or physical impairment in children was far more likely to be caused by chromosomal anomalies, inborn errors of metabolism, intrauterine growth retardation and infections (which in turn were correlated with low socioeconomic status, hypertension, preterm deliveries, antepartum haemorrhage, etc.) than by events at the time of birth. Perinatal events had accounted for between 8–15% of babies in these studies who were severely mentally