Missed Diagnosis

Dyskinesia in the elderly presenting as respiratory disorder

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Summary: Two elderly women suffering from dyskinesia affecting the respiratory muscles are described. The diagnosis was initially missed in both cases, and thought to be anxiety syndrome in one patient, and chronic obstructive airways disease in the other. Drug therapy further increased the severity of the dyskinetic movements which greatly improved when it was discontinued. Dyskinesia should be considered as the cause of respiratory disorder in old age, especially when this develops slowly in patients with movement disorders and a history of taking antidopaminergic drugs.

Introduction

Dyskinesia may occur spontaneously or as a result of drug therapy.¹ Both types occur more frequently in elderly people in whom the condition is usually more severe and less likely to resolve.² While most of the manifestations are easily recognized, some – especially the less familiar respiratory dyskinesia – can be confused with other conditions, leading to inappropriate and detrimental drug therapy. We present two cases.

Case reports

Case 1

A 90 year old woman was referred to hospital as an emergency, apparently suffering from an acute anxiety attack. During the previous two years she had been started on diazepam for the treatment of anxiety, and for one month she had also been prescribed metoclopramide 30 mg daily for anorexia. On the night of admission she was found in a state of confusion, unable to keep still and hyperventilating. Rebreathing into a paper bag and oral lorazepam 500 mg were tried with no effect.

On examination in casualty she was found to be confused, with shallow, grunting respirations at a rate of 28/min, a coarse bilateral tremor of her hands, involuntary rolling of her eyes, and writhing movements of her tongue, lips, neck, upper limbs and

right leg. Arterial blood with the patient breathing air showed a respiratory alkalosis.

According to her relatives the abnormal movements, of which the patient herself was unaware, had come on over the preceding two years but had worsened in the month immediately prior to admission. They were noted to be absent during sleep.

A diagnosis was made of spontaneous dyskinesia (Meige or Breughel's syndrome)⁶ of two years duration, aggravated by metoclopramide. The diazepam and metoclopramide were stopped and her confusion resolved. She was discharged home after one month on no drugs; when reviewed 2 months later the involuntary movements had greatly improved and arterial blood analysis showed only a mild alkalosis.

Case 2

An 83 year old lady was admitted for social reasons. She was known to suffer from tardive dyskinesia affecting her face and arms; this had begun after chlorpromazine treatment 7 years before.

More recently she had developed wheezing and apparent shortness of breath, for which she was prescribed inhaled salbutamol four times daily. During her admission aminophylline was added to her medication. She was eventually discharged home on inhaled salbutamol and oral aminophylline. On a subsequent visit, she was found to be markedly wheezy with irregular grunting respirations at a rate of 30 per minute which interfered with speech. Her dyskinesia had become generalized, involving her lower limbs and trunk and causing difficulty in walking.

At this time it was considered likely that her wheeze

and apparent shortness of breath were due to stridor due to laryngeal or glottal spasm combined with involuntary hyperventilation, a manifestation of her dyskinesia, and as such aggravated rather than helped by beta stimulants and aminophylline. All drugs were therefore stopped. She was unfortunately unable to undertake respiratory function tests, on account of her movement disorder. When reviewed a month later both her respiratory dyskinesia and her more generalized dyskinetic movements had subsided.

Discussion

The pathology of Meige syndrome, that is idiopathic cranial dystonia with variable generalized extension, remains uncertain.³ Only four post-mortem studies have been reported to date. One of these revealed no brain-stem abnormalities, two found cell loss from the nigra, mid-brain tectum, and cerebellar dentate nuclei. Cranial dystonia has also been reported following bilateral basal ganglia infarction.⁴ Although the precise site of dysfunction in Meige syndrome remains unclear, it is likely to involve the basal ganglia.

The mechanism of respiratory dyskinesia is likely to be central in origin. It has been shown that medicated patients with Parkinson's disease have normal respiration when well controlled, but develop respiratory and

generalized dyskinesias when overdosed with L-dopa.⁵ More worryingly, sleep apnoea can occur during 'off' periods of response to treatment.

The first of our two patients' dyskinesia was misinterpreted as anxiety 2 years before admission and treated with a benzodiazepine. These drugs are not free from side effects especially in old age⁶ and may have contributed to the patient's loss of appetite. For this she was subsequently prescribed metoclopramide, an antidopaminergic drug which is known to cause movement disorders or, as in this case, aggravate them when already present.^{7,8} Thus, where the diagnosis of dyskinesia is originally missed, the patient's management can become a spiral of compounded mistakes. The second patient's bronchodilator therapy illustrates the same problem: its deleterious effect on her breathing was not recognized for several months.

Dyskinesia, although rare, should always be borne in mind when dealing with the elderly, especially when there is a history of taking antidopaminergic drugs. It may mimic respiratory diseases, such as chronic obstructive airways disease, or the disturbed respiratory pattern of an anxiety state. Conversely, antidopaminergic drugs should be looked for in elderly dyskinetic patients. Failure to recognize this movement disorder may cause the prescription of unnecessary medication which may further endanger the patient's health.

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