Unusual presentation of more common disease/injury

Abnormal talk by a 14-year-old boy with hypersomnolence after a long-haul flight

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This case alerts readers to the occurrence of grammatical, nonsensical speech in a 14-year-old boy, an alarming symptom. Speech of this sort may be caused by serious medical conditions such as cerebral irritation and acute confusional states, but in this case it was most probably part of a sleepwalking episode associated with jetlag. Abnormal speech during sleepwalking has been described, but it is not well characterised. This report of somniloquy offers some descriptive phenomenology for such speech.

BACKGROUND

The case is important because it alerts readers to a cause of nonsensical grammatical speech in a 14-year-old boy, which is a very alarming symptom. Speech of this sort may be caused by serious conditions such as cerebral irritation and acute confusional state, but in this case it was due to sleepwalking.

Somniloquy, abnormal connected speech during sleepwalking, has been described, but it is rare and not well characterised. This report offers a small contribution towards helping to characterise the phenomenology of speech that may form a part of sleepwalking.

CASE PRESENTATION

At 8 h into a 13 h flight from Hong Kong to London in December 2009, the patient, a 14-year-old boy from London, started to vomit. The vomiting was not severe and to begin with it seemed possible it could have been related to eating too much chocolate during the flight.

The patient's father, who was sitting next to him on the plane, had himself been ill with violent vomiting 44 h earlier; he had subsequently spent 24 h in bed feeling nauseated, with colicky upper and lower abdominal pains, aching joints and slight diarrhoea. He had described his symptoms over the telephone to a senior clinical pathologist in Hong Kong who felt the most likely diagnosis was a norovirus gastroenteritis.

At 2 days after the onset of the father's illness on the plane journey back to the UK, the patient vomited four times in a controlled manner into a sick bag. On getting home 6 h later he went straight to bed and slept for most of the night and following day, getting up only for drinks and to go to the toilet, on which occasions he had diarrhoea. He was given no medication for these symptoms and experienced no further vomiting after the plane journey. The following evening, the diarrhoea had abated but the patient seemed unusually tired and went to bed at about 20:00. Some 90 min later he awoke and spoke to his mother in an incomprehensible manner, but answered her questions appropriately. On

coming downstairs he pointed to a computer screen (which was on) and said 'what about the papers and medicines?'. On being asked what he meant by this he replied 'you know, beyond that wing' pointing to the computer screen. Because the patient was talking grammatically but nonsensically, the patient's father asked him whether he knew he had recently been away from home. Initially, he did not reply. In response to the further questions 'Where have we been recently, and how did we travel there?' the patient replied 'Scotland, came home by bus and train'.

The patient and his parents had been in Hong Kong for 2 weeks, the first week staying in a hotel on Hong Kong Island, the second week staying in a flat on a small island, 30 min by boat from the main part of Hong Kong. During the visit the family had been well until the father began vomiting on day 13 of the stay, which delayed their planned return to the UK by 24 h.

The patient had no previous serious medical or surgical problems, was fully immunised according to the UK's immunisation schedule and has only had a few unremarkable childhood infectious conditions, including chickenpox and tonsillitis, from which he recovered well. On one occasion as a young child when feverish he was noted to be speaking in a confused manner, but this settled as soon as his fever was treated. From 6 to 10 years of age the patient experienced episodes of sleepwalking, where he would arise about 1 h or so after falling asleep and pace about with his eyes open with an 'unseeing' facial expression. On occasion during these episodes, he uttered the odd words but not connected speech; during these episodes the patient was generally not anxious or frightened and was responsive to parental reassurance and accepted being put back to bed.

As a baby the patient was a poor sleeper, having 'settling difficulties'; until 6 years of age he awoke several times a night and subsequently has usually resisted going to sleep at bedtime. Apart from over the counter childhood settlers (which were ineffective) he has not taken medication for this problem. After long distance, international travel the patient's sleep/wake schedule has been slow to adjust to

new time zones, and he has sometimes retained the UK pattern for 10 days or so. The patient has no history of mental illness and has not previously vomited when flying.

By the time the patient uttered the apparently nonsensical speech it was 21:30 on 22 December 2009. He was examined by BH, who is a London GP. He found him to be cooperative, sleepy, without slurred speech and neither anxious nor frightened. The patient answered questions, reported no headache and did not appear to be hallucinating. He seemed a little dissociated (for example he showed no insight into his parents' concern about him); was restless with eyes that looked somewhat glassy but not staring. He showed no automatisms of behaviour, although he twice repeated his question 'you know, what about the papers and medicines?'. He was oriented in time (initially he stated the month was January but when this was queried he correctly identified it as December) and place. He did not report double vision, moved about normally and all four limbs were active. His pulse was 74 beats/min and regular, he showed no fever (temperature 36°C), there was no neck stiffness or rash and he did not appear dehydrated. His pupils were equal, eye movements were normal and was not hyper-reflexive. During the examination, the patient kept lying down and closing his eyes, going off to sleep, but was easily rousable and when roused answered questions appropriately.

The possibility that he may be developing some sort of a brain disorder was considered. When in Hong Kong, his parents had seen posters warning the public about the possibility of developing malaria, dengue and Japanese encephalitis from insect bites, and 1 week before the onset of this behaviour the patient and his father had spent an afternoon hill walking in subtropical woods in the New Territories, where flying insects were present. His parents discussed taking the patient to casualty, but his father felt watchful waiting was probably safe, in view of a complete absence of physical signs, the lack of any fever and the absence of signs of cerebral irritability.

After clinical examination, the patient went to bed but got up again some 90 min later. When he came downstairs he was still noticeably speaking in a similar nonsensical vein. At this later stage, the patient showed no signs of fever and had no headache and went back to bed and immediately fell asleep. During the following night his parents twice woke him, when he responded appropriately and was not found to be hot (temperature not taken). The following day, the patient awoke and spoke quite normally and recalled some of the events of the previous night:

After a long plane journey from Hong Kong, upon which I had been sick, I awoke, feeling nauseous and tired after almost 30 h sleep. The process of waking up was slow, but I remember going downstairs to the kitchen, my intent to ask my father for some paracetamol. However when I got there I found words hard to articulate, and what I actually said remains hazy to me. I remember then going through to the living room after a brief and disorientating chat with my father. I felt dizzy, so I lay down and attempted to go to sleep. My father seemed unduly worried about my condition and insisted upon asking me questions, which I felt at the time to be unnecessary and annoying. I therefore tried to go to sleep on the sofa again, to be awoken once more by him.

He seemed very worried, and asked me what month it was. I found it hard to reply, as though something was

blocking my full mental capacity. I eventually replied 'January', and after being told that I was mistaken, I answered 'December', which was correct. I remember being confused as to why I had got the answer wrong, but my memory of the incident is hazy at best. Next my father asked me where we had been, but I didn't reply and tried to go back to sleep again, to be awoken once more by an increasingly worried Dad. He asked me the question again, and I replied 'Scotland'. He then asked me how we had got there. I replied 'by train and car'. My father then took my temperature, with a thermometer with mercury in it. I got very worried, as I thought it would poison me—I obviously did not think about the sealed glass barrier. Once my Dad had recorded my temperature as normal, I went back to bed.

Since the night of these events the patient has been quite well, but on the night of his abnormal speech, his mother also began to feel unwell and started vomiting.

DIFFERENTIAL DIAGNOSIS

- ▶ Sleepwalking somniloquy
- ▶ Acute confusional state secondary to viraemia, intoxication, medication or dehydration
- ▶ Delirium secondary to cerebral malaria or viraemia

TREATMENT

Observation.

OUTCOME AND FOLLOW-UP

The patient returned to normality the following day and there has been no recurrence since this episode.

DISCUSSION

Was the patient experiencing a recrudescence of sleepwalking 4 years after the cessation of earlier episodes brought on, on this occasion, by a combination of jetlag and gastroenteritis?

Sleepwalking is classed as a primary arousal parasomnia, which can take various forms, including complex motor behaviours (walking, wandering about apparently aimlessly, fumbling and sometimes uttering words) due to 'a dissociation between body sleep and mind sleep'.¹ In children, this typically takes place in the early stages of sleep. A recent review of the parasomnias of childhood characterises arousal disorders of sleep—confusional arousals, sleepwalking and sleep terrors—as involving 'a curious combination of features suggestive of being simultaneously awake and asleep and often appears confused and disoriented and relatively unresponsive to environmental events including parents' attempts to communicate. There is little or (usually) no recall of events during each episode of disturbed behaviour, at the end of which waking sometimes occurs, particularly in later childhood or adolescence. The more dramatic forms of arousal disorder, in particular, may well be interpreted by parents as a sign of psychiatric disorder, which is rarely correct. A child might display a sequence of confusional arousals in early childhood, sleepwalking later, followed by sleep terrors in later childhood and adolescence. Alternatively, elements of all three forms can occur at any one stage of development'.²

The patient had a history of sleepwalking of the calm variety; his episodes have never been characterised by

agitation, obvious fear or screaming, or by features suggestive of another primary parasomnia, such as confusional arousal or night terror.²⁻⁷ During the arousal episode reported here, the patient awoke from sleep, spoke spontaneously, answered questions, showed little insight into his parents' concern about him and kept falling asleep, features which do suggest 'being simultaneously awake and asleep'.²

When roused, the patient was responsive to attempts to communicate with him and was cooperative. Was he confused? The patient seemed to have forgotten his trip to Hong Kong (from which he had returned only 24 h previously) but he showed no profound disorientation in time or place. Initially, the patient said he had travelled home from Scotland (rather than from Hong Kong), suggesting a momentary disturbance of memory. In his own written account, the patient recalled that he was looking for paracetamol, possibly implying that at some level he felt unwell. With regard to his reference to the laptop screen being a 'wing', if he was dreaming while sleepwalking, which can sometimes happen, the dream seems unlikely to have been a nightmare and the patient had no subsequent memory of it (elements of nightmare are usually recalled).^{6,8}

If this was an episode of sleepwalking it showed particular features (grammatical, nonsensical, connected speech) that had not formed a part of the patient's earlier pattern of sleepwalking. Until this occurrence, the patient had not sleepwalked for a number of years. However, sleep loss and stress are thought to predispose to sleepwalking, both of which may be caused by jetlag, and although jetlag syndrome frequently features disturbed sleep (which clearly occurred here), it is not characterised by abnormal speech.^{9,10}

Could this episode have been a consequence of slight dehydration and electrolyte disturbance resulting from vomiting and diarrhoea? Electrolyte disturbance would seem unlikely to have been the cause in the patient's case as he had no other symptoms referable to such a cause such as weakness, he was not clinically dehydrated, and his vomiting and diarrhoea had been neither prolonged nor severe. An association between sleepwalking and large meals close to retiring to bed has been reported² but the patient had not eaten food for some 30 h prior to the onset of this episode. Could the patient have had a viraemia? His parents also experienced vomiting and diarrhoea, and it seems likely that the whole family experienced an infectious gastroenteritis of unknown origin; without fever, viraemia alone is unlikely to be the explanation.

Secondary arousal parasomnia can be caused by nocturnal seizures, but the patient's behaviour did not involve repetitive, stereotypical movements such as thrashing about or vocalisation (eg, mumbling, screaming or shouting). A secondary arousal parasomnia may also be caused by psychiatric illness but there have been no signs of psychological disturbance in the patient.²⁻⁵

The most likely diagnosis would appear to be primary arousal parasomnia as a result of sleepwalking which can feature abnormal talk although the nature of such talk is not well characterised. Sleepwalking may be difficult to recognise in certain contexts and this report offers a small contribution towards characterising the phenomenology of a somniloquy.

Learning points

- ▶ Sleepwalking manifests with features suggestive of someone being simultaneously awake and asleep.
- ▶ Sleepwalking can be difficult to recognise in certain contexts and occasionally may feature abnormal speech (as here).
- ▶ The somniloquy of sleepwalking described here involved grammatical, nonsensical talk, which could imply a degree of confusion and/or memory disturbance.
- ▶ Sleepwalking can be precipitated by sleep loss and stress, which may be associated with jetlag and long distance travel.
- ▶ Lack of fever in a 14-year-old whose behaviour was initially categorised as the somniloquy of sleepwalking does not exclude an acute confusional state caused by intoxication and/or drug ingestion (or rarely by infection).

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Patient consent Obtained

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