Managing factitious disorder and type 1 diabetes

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Abstract
Factitious disorder is a condition in which a patient feigns the symptoms of an illness in order to assume the sick role and get care. Less common is the context in which a patient has a genuine illness, but adopts non-compliance or other behaviours likely to worsen the illness. This is more difficult to identify and to treat.

We present two cases of patients with type 1 diabetes mellitus, affected by factitious disorder. We describe the impact of the disorder on their glucose control and general health, the challenges faced in diagnosing the psychiatric condition, and how the resulting situations were managed in a secondary care setting. We highlight the strategies often employed by patients in factitious disorder, and suggest counter-strategies that can be implemented to minimise risk to patients. Ultimately, timely therapy for the factitious disorder could aid glucose control, and the overall health of the patient.

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Key words
Type 1 diabetes; factitious disorder; diabetes

Introduction
Factitious disorder is a condition in which a patient feigns the symptoms of an illness in order to assume the sick role and get care. As this is often impossible to prove, in DSM v, it is only necessary that there is no obvious external gain for the symptoms, for example financial benefits. If there is an obvious reason, then the patient would be diagnosed as malingering. Less commonly mentioned is the situation where a patient has a genuine illness (e.g. type 1 diabetes) but uses non-compliance or behaviours which are likely to worsen the illness. This is likely to be more difficult to diagnose and to manage.

We describe two patients with type 1 diabetes with multiple admissions to hospital as a result of recurrent infections and poor glucose control. In both cases the psychiatric element to their illnesses was not immediately apparent; however, once the diagnosis of factitious disorder was made, partly successful management strategies were implemented.

Case history 1
Presentation
A 43-year-old lady with type 1 diabetes presented with septicaemia from a thigh wound and poor glycaemic control on insulin treatment.

Social history
She was a trained midwife, and was married with three adult children. She was a non-smoker and did not drink alcohol.

Past medical history
She had a complicated past medical history including depression, Von Willebrand’s disease and hysterectomy secondary to menorrhagia. Chronic migrainous headaches since the age of 15 were investigated extensively at a London hospital. Many different therapies had been tried including greater occipital nerve injections and intravenous dihydroergotamine. She received frequent intramuscular pethidine injections from the general practice for her pain and had developed an opiate dependence.

Two years prior to the index admission she developed a spontaneous hip haematoma which became infected. This was drained by an orthopaedic team. However, despite a prolonged course of antibiotics, infection recurred. Later in that year she presented with recurrent panniculitis in the right buttock and hyperglycaemia; diabetes was diagnosed. GAD65 antibody was found to be >2000 IU, confirming type 1 diabetes. This panniculitis progressed to an abscess in the right buttock.

The following year she had two prolonged admissions for infection related to intramuscular injection of pethidine. She developed corneal abrasion, conjunctivitis and pre-septal cellulitis. She was admitted thrice for right thigh cellulitis which progressed each time to an abscess. This eventually required debridement and a skin graft for reconstruction.
Case report
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<table>
<thead>
<tr>
<th>Patient strategy</th>
<th>Counter-strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not taking insulin while reporting it was being self-administered</td>
<td>• Insulin studies: supervised administration of Actrapid with 30-minute measurements of glucose and insulin showed that the patient absorbed insulin and developed adequately high levels in the blood of both short-acting insulin (DELFIA platform – up to 336pmol/L) and long-acting insulin (Merodiato platform – up to 869pmol/L). She developed hypoglycaemia to 3.5mmol/L. • Observation of unused insulin pens on ward round and confirmation that family had not provided new pens as reported by patient • Observed administration: found not to be an adequate strategy • Nurse provision of insulin only: insulin doses set by staff</td>
</tr>
<tr>
<td>Not taking other medication</td>
<td>• Medication would be observed by ward staff to ensure compliance • No medication kept at bedside</td>
</tr>
<tr>
<td>Additional insulin delivery</td>
<td>• Search of patient belongings: hoard of medication found • Observation of patient activity when possible</td>
</tr>
<tr>
<td>Eating additional food without insulin administration</td>
<td>• Direct observation when possible and challenge (e.g. heard to be eating additional muffin with subsequent hyperglycaemia: denied consumption – wrapper found in waste bag at side of bed) • Search of patient belongings: hoard of food found hidden</td>
</tr>
<tr>
<td>Tampering with temperature and observation recording</td>
<td>• Inspection of the chart found that the patient had been placing additional high temperature plots on the chart with her own initials below for one month: chart was placed outside the room</td>
</tr>
<tr>
<td>Introduction of line infections</td>
<td>• Observation: hard to prevent as still entitled to privacy at times (e.g. on commode)</td>
</tr>
<tr>
<td>Introduction of wound infections</td>
<td>• Observation: hard to prevent as still entitled to privacy at times (e.g. on commode)</td>
</tr>
<tr>
<td>Curtains drawn</td>
<td>• Curtains to be open at all times unless washing/toilet activities: hard to enforce</td>
</tr>
<tr>
<td>Insisted on own plastic binbag – not allowing others to tie up rubbish</td>
<td>• Standard approach required</td>
</tr>
</tbody>
</table>

Table 1. Strategies and clinical counter-strategies in relation to patient case no. 1

She suffered a severe episode of diabetic ketoacidosis (DKA) associated with a chest infection which led to intubation in the intensive care unit.

**Progress during and after the index admission**

The patient was re-admitted for recurrence of infection in her right thigh wound. Her blood glucose readings remained greater than 10mmol/L despite high doses of insulin (up to 380 units/day). She continued to spike temperatures despite use of the broad spectrum intravenous antibiotics, meropenem and linezolid. This led to a further two debridement procedures of her thigh. A trans-oesophageal echo demonstrated behaviour consistent with Munchausen’s by proxy. This was consistent with a previous assessment that had been forwarded by the GP. She met the criteria for section 2 of the Mental Health Act and was transferred to a psychiatric ward.

Unfortunately, less than three months later she was re-admitted from the psychiatric ward with a right antecubital fossa abscess. A foreign body was seen on ultrasound scan but was not found on surgical debridement. She also had another infection of her thigh wound. An X-ray was required to exclude a foreign body in her thigh before an MRI could be performed on her leg. This was delayed for several days by the patient as she refused to go. No foreign body was seen. During this admission, she was found with a 2ml syringe attached to her PICC line but was adamant that she did not know where the syringe had come from. It was a style of syringe that was not used on the ward and the markings were almost rubbed off, indicating that it was old. There was only a small drop of clear, colourless liquid remaining. Standard toxicology tests were negative. The patient had an episode of hypoglycaemia afterwards. She was eventually transferred back to the psychiatric facility.
Case report

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- The patient was not allergic to Actrapid insulin and this had been proven from tests at her district hospital and a tertiary centre allergy clinic
- The requirement to comply with treatment and engage with the multidisciplinary team
- The need for all medication including insulin to be administered and dosed by hospital staff only
- The necessity to search her belongings to ensure insulin or other medication was not being stored
- The requirement of the patient to remain on the ward and eat only the food given by hospital staff
- The right of ward staff to ask friends or relatives deemed to be having detrimental effects on care, to leave
- If the patient was unwilling to comply with these rules, the hospital would be unable to provide treatment and she would be discharged

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Box 1. The contract statements in relation to patient case no. 2

Case history 2
Presentation
A 29-year-old female was admitted with DKA after nausea and vomiting for several days with concomitant high blood glucose. She required treatment in the intensive care unit for 24 hours prior to moving to a diabetes specialist ward. Her diabetes was usually managed in a secondary care clinic in another region.

Social and family history
She worked in a bakery and studied office skills part-time. She lived with her parents and older sister to whom she was close. She had a normal birth and childhood. She neither smoked nor drank alcohol. There was no family history of illness.

Past medical history
She had been diagnosed with type 1 diabetes at the age of 10. Although she had reasonably good glycaemic control until the age of 18, from the age of 16 she had multiple admissions to hospital for various conditions: symptoms of urinary retention requiring intermittent self-catheterisation (subsequently developing a urinary tract infection with Staphylococcus aureus suggesting external introduction), an appendicectomy (which showed a normal appendix on histology), and vaginal bleeding from a tear with superadded infection. She was also admitted twice with accidental overdose of insulin.

From the age of 18, glucose control deteriorated. The local diabetes team reported that there may be a degree of manipulation to explain this. She was truanting from college and had developed unusual eating behaviours. Her family played a dominant role in her diabetes care. Family therapy was offered but declined; however, her parents were advised to play a lesser role.

Between the ages of 18–26 years she had over 18 admissions for DKA. Some of these episodes were in relation to hyperglycaemia secondary to steroids for a severe allergic reaction. During three of these admissions she had refused blood glucose monitoring. On one occasion she admitted to a neighbouring patient that she was deliberately eating high sugar foods to keep her blood glucose high in order to qualify for an insulin pump. She subsequently denied this statement. There were other issues of possible deliberate self-harm. She was admitted with anaemia from rectal bleeding. A rectal ulcer with normal histology was found which was unexplainable. On another occasion she developed MRSA bacteraemia from a peripheral line. Her diabetic control was always variable but improved with monitored insulin administration.

At 22 years of age, she was referred for continuous subcutaneous insulin infusion or insulin pump therapy. She was booked to undergo DAFNE (Dose Adjustment For Normal Eating) training as part of her pump education; however, this eventually occurred as an inpatient because of her frequent admissions. During this time, she was assessed by the liaison psychiatry team who deemed her to have no obvious psychiatric disorder. Insulin pump therapy was not initiated because of the perceived risk.

At the age of 24 years, her refusal over aspects of care during her frequent admissions resulted in a contract being drawn between the patient and our hospital, outlining a care plan for inpatient stay in order for staff to continue to provide their duty of care (see Box 1).

She did not return to this hospital after that admission, but was referred by her GP to an integrated diabetes and mental health clinic in London for a trial of an insulin pump. She ‘passed’ a psychiatric assessment based on the history she gave. Soon after obtaining the insulin pump she had further episodes of DKA and during admission had medically unexplained hypoglycaemia and hyperglycaemia. She was observed scratching her skin excessively and a neighbouring patient witnessed her inducing hypoglycaemia with hidden insulin. This prompted a repeat psychiatric assessment in conjunction with a review of her extensive medical history. A diagnosis of factitious disorder was made along with personality disorder (subtypes: anti-social, emotionally unstable, dependent, immature).

Progress during and after the index admission
On arrival, the (now five-year-old) contract was not formally put into place. She had erratic blood glucose control and on one occasion was found to have an extremely low blood glucose reading of 0.8mmol/L. An insulin pen had been left on her table and it was deduced that she had injected extra insulin. After treatment and discharge, she was re-admitted only three days later with another DKA secondary to nausea and vomiting. It was noted that she had chosen not to attend her usual local hospital. She had lost 10kg during this period of illness and was therefore reviewed by the dietitians who were surprised that she was keen to be given nasogastric feeding rather than build-up drinks. A discussion with her local dietetic team revealed previous requests for enteral feeding.

On one occasion she was found to have an area of erythema on her upper arm which on close inspection revealed five small puncture marks. The origin of these wounds remained unexplained. An ultrasound excluded a foreign body or collection; however, she required
antibiotic treatment. On another occasion she was found to have one extremely swollen hand with no obvious explanation. An X-ray was normal and the swelling resolved with elevation. It was noted that she wore an elastic hair band around her wrist which was likely to have been the cause (this was denied). Box 2 shows the management strategies put into place while an inpatient.

A further case conference was held and Box 3 shows the plan to be implemented.

She agreed to attend for long-term psychotherapy in the community (which she did not attend). She continued to have admissions with erratic glucose control. The introduction of insulin degludec and weekly telephone contact with an experienced diabetes educator was associated with reduced admissions for approximately nine months, but acute events subsequently increased again.

**Summary**

We describe two cases of patients with difficult diabetes control which, once critically investigated, led to a diagnosis of factitious disorder. In both cases, the patients were unable to give any explanation for the unusual findings. Although efforts were made, both by the diabetes team and by the psychiatric team, to explore the possibility that the patient was not following the treatment plan for reasons to do with psychological distress, the patient repeatedly denied this. This made it very difficult to create a joint management plan with the patient. They were therefore nursed using the methods outlined, with their best interests and safety in mind.

**Discussion**

There is one other case report in the literature describing factitious disorder presenting as DKA. In this case the patient was a 21-year-old woman with a history of poor social support and abuse. She knew how to care for her diabetes and had a low normal HbA1c, but had frequent admissions at a time that was convenient to her. She readily admitted omitting her insulin when her husband was out of town and she felt lonely, but only after arranging for pet care. She could not, however, provide any rationale for doing so. She declined psychological input on several occasions. The authors recommended the following treatment approach:

- Avoid placing patient confession of the factitious state as the end goal of treatment.
- Accept the symptoms not as indicators of illnesses the patient is trying to portray, but as a sign of the patient’s need to be nurtured.

In one case series of 33 patients with factitious disorder, patients were confronted with the factitious nature of their illness. Only 13 admitted feigned illness; however, in the majority, illnesses improved. Box 4 describes the features that suggest factitious disorder, and Box 5 the questions for health professionals to ask themselves if factitious disorder is suspected.

**Box 2. Patient case no. 2: management strategies while an inpatient**

- Psychiatric history to be communicated by the GP to all medical institutions involved in the patient’s care
- Multidisciplinary input with the psychiatry team on each admission
- Psychotherapy
- Regular risk assessment
- Managing health professional contact to ensure continuity for the patient and support for health care workers

**Box 3. Patient case no. 2: recommendations made for further care**

- Dramatic but inconsistent medical history
- Unclear symptoms that are difficult to manage and become more severe, or change once treatment has begun, or following negative test results
- Predictable relapses after improvement
- Extensive knowledge of hospitals and medical terms. May have worked in the health field
- Presence of many surgical scars or evidence of self-harming behaviour
- Presence of symptoms only when observed
- The patient appears eager to have invasive procedures or operations
- History of seeking treatment from many different hospitals, sometimes using different names
- Reluctance to allow staff to talk to relatives or other informants

**Box 4. Features suggestive of factitious disorder**

- Do the patient’s reported symptoms make sense in the context of all the test results and assessments?
- Is a collateral history available from other sources to confirm, or conflict with, what the patient is saying?
- Is the patient more keen to have invasive procedures than you would expect?
- Are treatments working in a predictable way?
- Is there a history suggestive of past abuse or neglect that may suggest psychological difficulties?

**Box 5. Questions to ask of oneself if factitious disorder is suspected**

- Ensuring that the patient’s knowledge of diabetes care and DAFNE principles was accurate
- Discussing her previous contract: it was agreed that it would be formally re-instated only if it was required
- All medication and charts were kept away from the patient. Insulin was dosed and administered by hospital staff only initially. Towards the end of stay she was allowed to adjust her dose according to DAFNE
- Input from the psychiatry team and a case conference

**Management of factitious disorder**

There is no good evidence to support any particular management approach. Controlled trials are clearly impossible in a population that rarely admit to the disorder and, even when they do, are difficult to engage in any kind of psychiatric treatment.

One systematic review in 2008 of factitious disorder overall, involving
Factitious disorder is a difficult life-threatening condition such as type 1 diabetes, it is important to try to offer a halfway position where something is suggested that may be more acceptable to the patient – for example, to suggest that, when someone is feeling stressed or distressed, they sometimes use their diabetes treatment to manage their mood.

Box 6. Strategies that could be employed

- Ensure that the patient has a good knowledge of how to care for their diabetes appropriately
- Address medical issues and seek appropriate investigations to exclude organic disease, while checking for evidence of self-harm
- Arrange case conferences with the ward staff, mental health services and the GP practice to develop a broad view of the situation
- Disseminate information and plan a strategy for inpatient and community management of the condition. The safety of others should also be considered
- Confront the patient with collected evidence to support the diagnosis and renegotiate the doctor/patient relationship
- Be prepared to continue to follow up these patients even if from another area in order to maintain continuity of care and build trust
- Avoid placing patients with factitious disorder in close proximity. Both of the patients described above were admitted to the same bay: they were immediately separated to avoid colluding

Box 7. Possible strategies to help manage patients with factitious disorder and diabetes

32 case reports and 13 case series, found insufficient evidence to support any particular approaches. Aspects reviewed included confrontational or non-confrontational approaches, medication versus no medication, psychotherapy versus no psychotherapy, longer treatment versus shorter, and inpatient versus outpatient.

Overall, the first goal is to modify behaviour and reduce or limit the opportunities that the patient has to self-medicate, self-harm, or interfere with results or equipment. The second goal is to try to engage the patient in a psychological assessment and formulation that can link the behaviour to emotional problems or needs. In the more typical cases of patients who travel from one hospital to another (as did our second patient), the patient will often self-discharge once confronted with their behaviour. In patients with a genuine life-threatening condition such as type 1 diabetes, it is important to try to offer a halfway position where something is suggested that may be more acceptable to the patient – for example, to suggest that, when someone is feeling stressed or distressed, they sometimes use their diabetes treatment to manage their mood.

There are cases of factitious disorder in other chronic diseases such as asthma and epilepsy. The generic strategies we have described could be applied to a patient with factitious disorder exacerbating any other chronic illness. The long-term intense nature of these conditions may indeed have an impact on a person’s mental health. While some support may be available from specialist nurses in each field already, some formal psychological (or even psychiatric) input would be useful for susceptible individuals. Further research is required in this field.

References

5. Richardson J. Factitious asthma. JAMA 1983;250(4):484.