Erratic mood changes

By Sarah Curulli

Pharmacists routinely use investigative questioning in their pharmacy practice. Medication mystery scenarios are commonly occurring situations where detailed questioning uncovers a complex case requiring a substantial intervention. These articles demonstrate how a pharmacist can adopt a systematic problem solving approach to improve patient outcomes. For educational purposes, questions and answers are presented collectively, while in practice, questions would be asked and answered sequentially.

Learning objectives

After reading this article you should be able to:

- Recognise signs and symptoms of corticosteroid-associated psychiatric reactions
- Discuss strategies to manage corticosteroid-associated psychiatric reactions
- Identify key counselling and education that a pharmacist can provide to patients commencing corticosteroid therapy, to minimise the impact of corticosteroid-associated psychiatric reactions.

Competency standards (2010) addressed:

4.2.2, 6.1.1, 6.1.2, 6.1.3, 7.1.1, 7.1.2, 7.1.3, 7.1.4

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Case presentation

Renee (32 years) presents to the pharmacy with her husband, Stewart, complaining of labile mood. She has ‘not been feeling herself lately’ and her husband has finally convinced her to ask for help. Stewart describes Renee’s symptoms as alternating moods, from feelings of depression (or flatness) to extreme elation. Her current symptoms are affecting their relationship and they have come to you today for some advice and assistance, as they wonder if these symptoms could be related to some of Renee’s current medications.

Information gathering

You speak with Renee to investigate the cause of her erratic mood changes.

1. Symptoms
- Can you describe the nature of your mood changes in more detail?
- Are you experiencing any other symptoms at present?

2. Onset of symptoms
- How long have you experienced mood changes for?
- Have you ever experienced erratic changes in mood in the past?

Renee says that she has ‘not been feeling herself lately’. Her husband further describes her current symptoms. Renee experiences days of extreme depression, where she cannot leave the house and participate in normal daily activities, including work. She is also experiencing periods of extreme elation, where she cannot sleep and is ‘buzzing around the house’ as if she is on a ‘natural high’. Stewart is extremely concerned with these alternating moods and mentions that Renee has become extremely irritable. Renee mentions that she is also experiencing some ‘stomach problems’, where she feels urgency to pass a motion, due to her ulcerative colitis.
Stewart informs you that Renee’s mood changes started about 10 days ago, and her symptoms appear to be progressively worsening. Renee does not recall ever experiencing such dramatic mood changes and feels quite frightened by the experience.

Medical history

- Do you have any medical conditions?
- Are you taking any other medicines (including over-the-counter and herbal medicines)?

Renee was diagnosed with an extensive case of ulcerative colitis six months ago (confirmed by colonoscopy and biopsy). She has been seeking treatment from a gastroenterologist for this condition. Two weeks ago, Renee experienced an acute exacerbation of her ulcerative colitis and was prescribed prednisolone 50 mg daily. She is due to visit her specialist next week for a review of her symptoms and to check if she can reduce the dose of her steroids, as she ‘hates taking prednisolone’.

‘Corticosteroids (such as prednisolone) often induce psychiatric syndromes, including depression, mania, psychosis, and delirium.’1 Mania and depression are the most common psychiatric symptoms that can be caused by corticosteroids.2 These side effects can occur as early as three days after commencing corticosteroid therapy and the higher the dose, the greater the risk of psychiatric symptoms.2 Renee is currently taking a high dose of prednisolone (50 mg daily). Patients taking between 41 and 80 mg of prednisolone daily have a 4.6% chance of developing psychiatric side effects.2

3. Previous and current treatment

- Have you been prescribed prednisolone for ulcerative colitis in the past?
- If so, did you experience any side effects?

This is Renee’s second course of oral prednisolone since being diagnosed with ulcerative colitis. The dose for her first course was 50 mg daily which was tapered over several weeks and then ceased. The last time Renee used prednisolone she noticed that she retained ‘lots of fluid’ while taking the prednisolone and it made her feel nauseous. However, Renee and Stewart do not recall any dramatic mood changes at that time.

There appears to be no relationship between the ‘response to the first course of steroid treatment and [the] response to a second course of the drug’.3 The absence of psychiatric side effects during the initial course of prednisolone does not predict the response to a subsequent course of the medication.3

Renee has experienced significant alterations in mood over the past 10 days. She has experienced episodes of depression alternating with periods of euphoria. This is the first time she has suffered from such symptoms. There are several potential causes of erratic mood changes:

- **Premenstrual Syndrome (PMS)** is a common disorder of middle aged women, characterised by emotional and physical symptoms in the luteal phase of the menstrual cycle.4 Symptoms of PMS can include depression, irritability, mood swings, breast tenderness, bloating and back pain.4 A diagnosis of PMS is usually confirmed by recurrence of symptoms for at least two consecutive menstrual cycles.4

Renee does not experience any breast tenderness, bloating or back pain in association with her menstrual cycle. Sometimes, she experiences some ‘cramping pain’ when her period is due, but otherwise she has never experienced symptoms of PMS. As Renee’s current symptoms have occurred over the past 10 days, and she does not report experiencing any physical symptoms of PMS in the past, PMS is an unlikely cause of her erratic mood changes.

- **Bipolar disorder** is a mood disorder ‘characterised by extreme fluctuations in mood from euphoria to severe depression.’7 Patients with bipolar disorder may experience periods of severe depression, mania, hypomania or mixed episodes.6 Bipolar depression is characterised by slowing of physical and cognitive functions, increased appetite, hypersomnia (increased sleep) and suicidal thoughts.5 Episodes of mania are characterised by an inflated sense of one’s own abilities, increased speed of thoughts and a reduced need for sleep.6

On questioning, you discover that Renee has not experienced any sleep disturbances over the past 10 days. She describes her periods of depression as ‘flatness’, but she does not experience a change in appetite and has never considered suicide. During Renee’s episodes of extreme elation she seems to have ‘more energy’, and does not experience any symptoms of grandiosity or increased speed of thoughts. Although bipolar disorder is still a consideration in this case, it appears that Renee’s symptoms have developed in association with corticosteroid treatment.

- **Medications**, such as beta blockers and corticosteroids, can cause psychiatric side effects (depression and disturbances of mood).6 Corticosteroid therapy can cause drug induced psychosis in up to 18% of patients.2 The aetiology and pathogenesis of

- **Chronic use of alcohol** is associated with a greater risk of psychosis.5 In the long term, alcohol abuse can cause mood and personality changes, anxiety and insomnia.5

Renee tells you that she does not drink a lot of alcohol. She enjoys a glass or two of red wine when she and Stewart go out for a weekly meal at their favourite restaurant. This rules out the possibility of chronic alcohol abuse causing Renee’s erratic mood changes.

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The neuropsychiatric side effects associated with corticosteroids remains poorly understood. Most psychiatric side effects occur early in the therapeutic course and include symptoms such as depression and mania. It is reported that corticosteroid induced psychosis is more likely to occur in females, but this may be due to the higher incidence of diseases requiring treatment with corticosteroids (e.g. rheumatoid arthritis, systemic lupus erythematosus) occurring in females.

Renee is currently taking prednisolone 50 mg daily for an acute exacerbation of her extensive ulcerative colitis. She commenced her treatment course two weeks ago, and shortly afterwards Renee developed erratic mood changes, from depression to extreme elation. It appears that Renee may be suffering from a corticosteroid-associated psychiatric reaction. Following her recent commencement of high dose prednisolone, Renee has developed symptoms consistent with corticosteroid induced psychosis and an appropriate treatment regime will be required.

**Recommendations**

You recommend that Renee return to her gastroenterologist or GP as soon as possible. Corticosteroid induced psychosis is usually managed by tapering off the steroid and treating psychiatric symptoms if required. Psychiatric disturbances that are induced by corticosteroids commonly resolve slowly after discontinuation of the drug or reduction of the dosage. Depression, mania and psychosis can take between one and six weeks to resolve completely, after discontinuation of the offending agent.

The following is a brief treatment algorithm for patients who develop psychiatric symptoms while taking a short course of corticosteroids:

- Review medication profile and identify any other psychoactive medications.
- If corticosteroids are the suspected agent, reduce dose as quickly as tolerated and discontinue if possible. Consider a lower dose of corticosteroid medication, e.g. a prednisolone dose of less than 40 mg per day is associated with a 1.3% chance of developing steroid induced psychosis.
- If symptoms do not respond to a reduced dose or cessation of the corticosteroid, consider treatment with an atypical antipsychotic as first line therapy.

In the meantime, Renee will require treatment for her acute exacerbation of ulcerative colitis. Other treatment options include the use of local and/or oral 5-aminosalicylates (e.g. sulfasalazine).

**Follow-up**

Renee and Stewart return to the pharmacy eight weeks later. Renee’s gastroenterologist reduced the dose of her prednisolone over two weeks (and finally ceased the medication) and commenced her on oral and rectal sulfasalazine. Within two weeks of ceasing prednisolone Renee’s mood was back to her pre-prednisolone state. The erratic mood changes slowly dissipated upon reducing the prednisolone dose (and eventually ceasing the medication). Renee mentions that the sulfasalazine is not as effective as the prednisolone in controlling her ulcerative colitis symptoms. Her gastroenterologist is considering prescribing a lower dose (<40 mg daily) of prednisolone if she experiences another acute exacerbation in the future. You reassure Renee that she may not necessarily develop steroid induced psychosis upon future treatment with prednisolone, as the response can vary with each treatment course.

You provide Renee with a Consumer Medication Information (CMI) leaflet on prednisolone, highlighting the main side effects. In the future, she should notify her gastroenterologist or GP immediately if she experiences any erratic changes in mood, irritability or depression whilst taking prednisolone.

**Key learning points**

- Psychiatric disturbances can occur in patients who are prescribed corticosteroid medication.
- Erratic mood swings, alternating from depression to extreme elation, can affect the quality of a patient’s life and relationships.
- Pharmacists should adequately counsel patients who are prescribed corticosteroids on the possibility of this side effect, and if it occurs they should be referred to their GP as soon as possible.
- Patient education regarding this side effect can enhance early intervention for adverse corticosteroid-induced psychiatric reactions.
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References


Questions

1. A patient experiencing corticosteroid induced psychosis after an initial course of prednisolone:
   a) will always experience corticosteroid induced psychosis upon further treatment with any corticosteroid medication.
   b) is unlikely to experience corticosteroid induced psychosis upon further treatment with any corticosteroid medication.
   c) may have a lower risk of corticosteroid induced psychosis if the dose of prednisolone is lowered to less than 40 mg per day.

2. Which ONE of the following statements is INCORRECT?
   a) With a higher corticosteroid dose, there is a higher incidence of developing corticosteroid induced psychosis.
   b) Males are more likely to develop corticosteroid induced psychosis than females.
   c) The aetiology of corticosteroid induced psychosis is poorly understood.
   d) Corticosteroid induced side effects can occur as early as 3 days after therapy has been commenced.
   e) A patient taking 60 mg prednisolone daily has a 4.6% chance of developing a corticosteroid induced psychiatric side effect.

3. Corticosteroid therapy can cause drug related psychotic disorders in up to what percentage of patients?
   a) 18%.
   b) 28%.
   c) 36%.

4. Regarding corticosteroid induced psychosis, which ONE of the following comments is CORRECT?
   a) Reduction of the patient’s daily dose of prednisolone to 40–50 mg daily will result in complete dissipation of psychotic symptoms associated with corticosteroid use.
   b) If symptoms do not respond to a dose reduction or withdrawal of the corticosteroid an atypical antipsychotic agent may be prescribed.
   c) Psychiatric disturbances induced by corticosteroids commonly resolve very quickly after discontinuation of the drug or reduction of the dosage.