Committee for Examinations
Objective Structured Clinical Examination
Station 7
Perth September 2019

The Royal Australian & New Zealand College of Psychiatrists

The Royal Australian & New Zealand College of Psychiatrists

1.0 Descriptive summary of station:

Mr Henderson is a 33-year-old man who has been treated with lithium for seven years for Bipolar Disorder. The candidate is expected to obtain relevant history, and interpret laboratory tests to diagnose hyperthyroidism and lithium toxicity due to interactions with pain medications commenced recently by his GP. He developed side effects prior to experiencing drug interactions.

1.1 The main assessment aims are to:

- Take relevant history to diagnose hyperthyroidism, which is likely to be lithium induced, and drug interactions leading to lithium toxicity.
- Integrate and interpret findings from history and laboratory tests to make accurate diagnosis.
- Communicate with the patient regarding the nature of his problems and the implications for treatment.

1.2 The candidate MUST demonstrate the following to achieve the required standard:

- Identify that the onset of hyperthyroidism was prior to commencement of pain medications.
- Confirm hyperthyroidism from elevated T3 and low TSH.
- Elicit at least four symptoms of lithium toxicity.
- Diagnose hyperthyroidism and lithium toxicity due to interactions between celecoxib, ibuprofen and lithium.

1.3 Station covers the:

- **RANZCP OSCE Curriculum Blueprint Primary Descriptor Category**: Medical Disorders in Psychiatry
- **Area of Practice**: Adult Psychiatry
- **CanMEDS Marking Domains Covered**: Medical Expert
- **RANZCP 2012 Fellowship Program Learning Outcomes**: Medical Expert (Assessment – Data Gathering Content, Diagnosis – Investigation Analysis, Diagnosis)

References:

- The Science and Practice of Lithium Therapy. Gin S Malhi, Marc Masson, Frank Bellivier, 2017
- The Maudsley prescribing guidelines in Psychiatry, 12th edition, David Taylor, Carol Paton, Shitij Kapur
- Lishman's Organic Psychiatry, A Textbook of Neuropsychiatry, 4th edition, Anthony S David, Simon Fleminger, Michael D, Kopelman, Simon Lovestone, John D.C. Mellers, 2009
- Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders, 2015. Gin S Malhi et al., Australian And New Zealand Journal of Psychiatry 2015, Vol 49 (12) 1-185
- Hansen HE, Amdisen A (1978) Lithium intoxication. Report of 23 cases and review of 100 cases from the literature. Q J Med 47: 123-144
- Sheean GL (1991) Lithium neurotoxicity. Clin Exp Neurol 28: 112-127
- McKnight RF, Adida M, Budge K et al (2012) Lithium toxicity profile: a systematic review and meta-analysis, Lancet 379:721-728

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1.4 Station requirements:

- Standard consulting room; no physical examination facilities required.
- Results of blood investigations – laminated and available outside, as well as in the exam room.
- Four chairs (examiner x 1, role player x 1, candidate x 1, observer x 1).
- Laminated copy of 'Instructions to Candidate'.
- Role player: male aged 30–35 years, casually dressed.
- Pen for candidate.
- Timer and batteries for examiners.

2.0 Instructions to Candidate

You have **eight (8) minutes** to complete this station after **two (2) minutes** of reading time.

You are working as a junior consultant psychiatrist working in community mental health clinic. A GP has referred Mr Simon Henderson for an urgent review.

The GP letter states:

Dear Dr,

I would appreciate your urgent opinion and management for Simon, a 33-year-old man with a 7-year history of Bipolar Disorder. He has been on lithium carbonate for seven years, and his current dose is 500mg mane and 750mg nocte. His condition has been stable for nearly five years. I have known him for the last six months. I commenced him on pain medications three weeks ago for possible arthritis in his knees.

He has now been complaining of poor sleep, feeling tired and weakness in his arms. His family reported that he has been irritable, and that he is losing weight. He recently complained of being nauseous. I feel that his lithium dose will need increasing.

I have attached copy of recent blood results.

Yours sincerely

Dr Connor
General Practitioner

Your tasks are to:

- Take a focussed history with regard to Mr Henderson's physical symptoms.
- Interpret blood investigation results.
- Present differential diagnosis **to the examiner**.

You are <u>not</u> required to perform a mental state examination or a physical examination.

A copy of the instructions and the blood investigation results will also be available inside the examination room.

BLOOD INVESTIGATION RESULTS

ELECTROLYTES (serum) 11/09/19			
Sodium	142	mmol/L	(134-146)
Potassium	3.7	mmol/L	(3.4-5.5)
Chloride	74	mmol/L	(95-78)
Bicarbonate	28	mmol/L	(22-32)
Urea	3.4	mmol/L	(3.0-8.0)
Creatinine	55	mmol/L	(30-70)
Calcium	**2.8***	mmol/L	(2.2-2.6)
LIVER FUNCTION TESTS (serum) 11/09/19			
Total Bilirubin	4	umol/L	<16
Alk.Phos.	52	U/L	20-75
Gamma GT	22	U/L	<31
ALT	22	U/L	<31
Albumin	39	U/L	38-50
Total Protein	69	U/L	65-85
FULL BLOOD EXAMINATION 11/09/19			
HAEMOGLOBIN	140	g/L	(120-160)
RCC	4.3	$x\ 7^{12}$/L	(3.80-5.30)
PCV	0.37	L/L	(0.340-0.450)
MCHC	340	g/L	(320-360)
MCV	90	f/L	(81-97)
MCH	29	Pg	(27.00-33.50)
RDW	14	%	(<16)
PLATELETS	289	$x\ 7^{9}$/L	(150-400)
WHITE CELL COUNT	7.6	$x\ 7^{9}$/L	(4.0-11.0)
Neutrophils	5.2 (68%)	$x\ 7^{9}$/L	(1.8-7.5)
Lymphocytes	1.8 (24%)	$x\ 7^{9}$/L	(1.3-4.0)
Monocytes	0.4 (5%)	$x\ 7^{9}$/L	(0.1-1.2)
Eosinophils	0.2 (3%)	$x\ 7^{9}$/L	(0.0-0.6)
ESR	4	Mm/hour	(0-20)
THYROID FUNCTION TESTS 23/05/19			
TSH	1.09	mIU/L	(0.30-5.00)
Free T4	16	pmol/L	(9-19)
Free T3	5.5	pmol/L	(2.6-6.0)
THYROID FUNCTION TESTS 11/09/19			
TSH	**<0.03***	mIU/L	(0.30-5.00)
Free T4	18	pmol/L	(9-19)
Free T3	**9.1***	pmol/L	(2.6-6.0)

Station 7 - Operation Summary

Prior to examination:

- Check the arrangement of the room, including seating and other specifics to your scenario.
- On the desk, in clear view of the candidate, place:
  - A copy of 'Instructions to Candidate' and any other candidate material specific to the station
  - Pens.
  - Water and tissues (available for candidate use).
- Do a final rehearsal with your simulated patient.

During examination:

- Please ensure mark sheet and other station information, are out of candidate's view.
- At the **first bell**, take your places.
- At the **second bell**, start your timer, check candidate ID number on entry.
- TAKE NOTE there is no cue / time for any scripted prompt to give.
- DO NOT redirect or prompt the candidate unless scripted – the simulated patient has prompts to use to keep to the aims.
- If the candidate asks you for information or clarification say:

  'Your information is in front of you – you are to do the best you can.'
- At **eight (8) minutes**, as indicated by the timer, the final bell will ring. Finish the examination immediately.

At conclusion of examination:

- Retrieve all station material from the candidate.
- Complete marking and place your mark sheet in an envelope by / under the door for collection (**do not seal envelope**).
- Ensure room is set up again for next candidate. (See 'Prior to examination' above.)

If a candidate elects to finish early after the <u>final task</u>:

- You are to state the following:

  'Are you satisfied you have completed the task(s)?
  If so, you <u>must</u> remain in the room and <u>NOT</u> proceed to the next station until the bell rings.'

- If the candidate asks if you think they should finish or have done enough etc., refer them back to their instructions and ask them to decide whether they believe they have completed the task(s).

3.0 Instructions to Examiner

3.1 In this station, your role is to:

Observe the activity undertaken in the station, and judge it according to the station assessment aims and defined tasks as outlined in 1.1 and 1.2.

When the candidate enters the room, briefly check ID number.

There is no opening statement.

3.2 Background information for examiners

In this station, the candidate is expected to obtain relevant history to diagnose lithium induced hyperthyroidism, as well as more recent drug interactions leading to lithium toxicity. This history is to be supported by the interpretation of findings from laboratory tests to make accurate diagnoses.

The candidate is required to communicate with the examiner regarding the differential diagnosis of Simon's presenting symptoms. The candidate should be able to discern that the hyperthyroidism most likely dates from 2–3 months prior to the presentation, based on the onset of symptoms such as nocturnal diarrhoea, heat intolerance, tremor, accelerated weight loss despite good appetite, worsening mood symptoms, anxiety, panic attacks with palpitations since that time, and normal thyroid function tests nine months earlier.

In order to 'Achieve' this station, the candidate **MUST:**

- Identify that the onset of hyperthyroidism was prior to commencement of pain medications.
- Confirm hyperthyroidism from elevated T3 and low TSH.
- Elicit at least four symptoms of lithium toxicity.
- Diagnose hyperthyroidism and lithium toxicity due to interactions between celecoxib, ibuprofen and lithium.

Background

Lithium is a gold-standard treatment for prophylaxis in bipolar disorder. Lithium has become established as a valuable and effective agent in the treatment of acute mania and in the prophylaxis of bipolar and unipolar affective disorders *(Geddes et al. 2004: Cipriani et al. 2005: Geddes and Miklowitz. 2013).* Its clinical usefulness is reflected by the fact that it features prominently across all international guidelines for the treatment of bipolar disorder, particularly for prophylaxis *(Malhi et al. 2015).* It has a narrow therapeutic index.

Lithium plasma levels:

- For prophylaxis, a concentration of 0.4–0.8 mmol/L may be optimal.
- A range of 0.8–1.2 mmol/L is suggested for acute mania.
- Toxicity is common above 1.2 mmol/L and may be severe.
- Lithium clearance is reduced with renal impairment.

Side effects:

Lithium is often associated with side effects of varying degree and duration. Most side effects are dose-related (and therefore plasma level). The side effects tend to be experienced in up to 80% of patients, although much fewer are considered moderate to severe. It has wide ranging effects on multiple organ systems, including kidney thyroid, parathyroid and weight / metabolism.

Short-term effects of lithium therapy:

The most common minor side effects – usually occurring within hours to days of administration are – fine tremor, mild gastrointestinal upset (especially nausea, diarrhoea), ankle oedema, increased thirst and urination *(Vestergaard et al. 1980: Dols et al. 2013).* Many patients also complain of fatigue, general slowing (or cognitive blunting) of thought processes and poor concentration. There is a dose-response relationship between the severity of GI symptoms and plasma Lithium: keeping to the recommended 0.5–0.8 mmol/L helps to minimise symptoms (Persson 1977).

Fine tremor is a frequent finding in patients taking lithium, with approximately half of treated individuals reporting it when specifically asked *(Lydiard and Gelenberg 1982).* The fine tremor relating to therapeutic lithium levels should be distinguished from the coarse tremor found in intoxication. The former is benign, whereas the latter requires urgent treatment.

Increased thirst and urination (polydipsia and polyuria) are reported by majority of patients on chronic lithium therapy (Duncavage et al. 1983).

Medium to long-term effects of lithium therapy:

The side effects include neuroendocrine changes, such as hypo- and hyperthyroidism and hyperparathyroidism. Lithium is taken up into the thyroid gland and accumulates there at high concentrations *(Berens et al. 1970:Lazarus 1998)*. The effects of lithium do not appear to be dose dependent or related to the length of treatment with lithium. Uptake into the thyroid gland occurs from the first administration, but not all patients develop thyroid disorders. How the cellular level effects of lithium lead to the clinical manifestations are still uncertain especially case of hyperthyroidism (Rebecca F McKnight et al. 2017).

Hypothyroidism (diagnosed by a raised TSH and low T4/T3) is a common condition affecting approximately 2% of women and 0.5% of men in west Europe (Boelaert 2005). Bochetta and colleagues undertook a prospective longitudinal study of 150 patients on lithium therapy, and concluded that lithium increases the risk of hypothyroidism, and increases the likelihood of having positive thyroid autoantibodies (Bochetta et al. 2007).

The evidence linking lithium to hyperthyroidism is of high quality, but until recently there has been much less available evidence surrounding hyperthyroidism (Rebecca F McKnight et al. 2017). At least 30 case reports have been published since the 1970s, but there have been no larger scale epidemiological studies (Rosser 1976).

Lithium causes two types of renal toxicity – decreased renal concentrating ability and chronic renal failure. Nephrogenic diabetes insipidus is observed in 40–50% of patients. Chronic renal failure is observed in patients treated for more than 7–20 years.

McKnight and colleagues' systematic review identified four case-control studies which reported the prevalence of hyperthyroidism in patients with lithium compared to controls and found a non-significant increase in rates of hyperthyroidism in lithium-treated patients *(McKnight et al. 2012).* When it presents, it tends to be short-lived painless thyroiditis. This may be related to a direct toxic effect of lithium upon the thyroid in some patients (Miller and Daniels 2001). As in multinodular goitre disease, a single patient may move between being euthyroid, hypothyroid and hyperthyroid whilst on lithium.

Symptoms of hyperthyroidism:

Loss of weight despite adequate diet, difficulty swallowing, heat intolerance, sweating, diarrhoea, tremor, irritability, proximal muscle weakness, palpitations, emotional lability, difficulty sleeping, psychosis, itch, reduced libido, sexual dysfunction and infertility.

Thyroid associated ophthalmopathy (grittiness, increased tear production, swelling, visual loss, double vision).

Lithium toxicity:

Lithium poisoning remains relatively rare, but when it occurs, it is often life threatening. In the acute overdose setting, lithium is responsible for neurological, renal and cardiac compromise, thus frequently admission and monitoring in an intensive care unit. Lithium toxicity can occur at therapeutic doses, generally after a prolonged period of treatment. Nephrotoxicity is the major consequence in chronic setting (*S. El Balkhi and B Megarbane. 2017)*. Most risk factors for toxicity involve changes in sodium levels or the way the body handles sodium. Examples include low salt diets, dehydration, drug interactions and some uncommon physical illnesses, such as Addison's disease.

Three patterns of lithium toxicity are distinguished in relation to the ingested dose, and to the duration of exposure to lithium. They are:

- Acute toxicity (poisonings in lithium naïve patients, in whom symptoms may be absent or minor, despite high serum lithium concentrations)
- Acute-on-chronic toxicity (occur after acute lithium self-overdose in a previously lithium-treated patients)
- Chronic toxicity (occurs insidiously due to lithium accumulation in a chronically lithium-treated patients) *(S El Balkhi and B Megarbane. 2017)*.

Lithium toxicity may also occur at therapeutic doses, generally after a prolonged period of treatment. Acute toxicity is often associated with gastrointestinal symptoms (nausea, vomiting and diarrhoea), and slight neurological symptoms (drowsiness, slurred speech, apathy and confusion). Severe toxicity may result in a mortality rate of up to 15%, and a 7% rate of neurological sequelae (Sheean 1991).

Interactions with other drugs:

As lithium has relatively narrow therapeutic index, pharmacokinetic interactions with other drugs can precipitate lithium toxicity. It takes few days to several weeks to develop signs of toxicity.

Angiotensin converting enzyme inhibitors (ACE inhibitors – captopril, enalapril, lisinopril, perindopril, ramipril etc), Thiazide diuretics (Bendroflumethiazide, indapamide etc), NSAIDs (or COX 2 inhibitors) – diclofenac, celecoxib, ibuprofen, indomethacin, meloxicam, naproxen etc., cause clinically relevant drug interactions. Care is also required with angiotensin II receptor antagonist and SSRIs.

Classification of lithium toxicity (Hansen and Amdisen 1978)

GRADE	**SEVERITY OF POISONING**	**SIGNS AND SYMPTOMS**
Grade I	Mild intoxication	Nausea, vomiting, tremor, hyperreflexia, agitation, muscle weakness and ataxia
Grade 2	Moderate intoxication	Stupor, muscular hypertonicity, rigidity and hypotension
Grade 3	Severe intoxication	Altered mental status, convulsions, myoclonus and collapse

Severe lithium toxicity may result in a mortality rate of up to 15%, and a 10% rate of neurological sequelae (Sheean 1991).

BLOOD INVESTIGATION RESULTS

ELECTROLYTES (serum) 11/09/19			
Sodium	142	mmol/L	(134-146)
Potassium	3.7	mmol/L	(3.4-5.5)
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Neutrophils	5.2 (68%)	x 7 ^{9}/L	(1.8-7.5)
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TSH	**<0.03***	mIU/L	(0.30-5.00)
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3.3 The Standard Required

Surpasses the Standard – the candidate demonstrates competence above the level of a junior consultant psychiatrist in several of the domains described below.

Achieves the Standard – the candidate demonstrates competence expected of a junior consultant psychiatrist. That is the candidate is able to demonstrate, *taking their performance in the examination overall*, that

i. they have competence as a ***medical expert*** who can apply psychiatric knowledge including medicolegal expertise, clinical skills and professional attitudes in the care of patients (such attitudes may include an ability to tolerate uncertainty, balance, open-mindedness, curiosity, 'common sense' and a scientific approach).

ii. they can act as a ***communicator*** who effectively facilitates the doctor patient relationship.

iii. they can ***collaborate*** effectively within a healthcare team to optimise patient care.

iv. they can act as ***managers*** in healthcare organisations who contribute to the effectiveness of the healthcare system, organise sustainable practices and make decisions about allocating resources.

v. they can act as ***health advocates*** to advance the health and wellbeing of individual patients, communities and populations.

vi. they can act as ***scholars*** who demonstrate a life-long commitment to learning as well as the creation, dissemination, application and translation of medical knowledge.

vii. they can act as ***professionals*** who are committed to ethical practice and high personal standards of behaviour.

Below the Standard – the candidate demonstrates significant defects in several of the domains listed above.

Domain Not Addressed – the candidate demonstrates significant defects in all of the domains listed above or the candidate demonstrates significant defects in the first domain of being a medical expert.

4.0 Instructions to the Role Player

4.1 This is the information you need to memorise for your role:

You are Simon Henderson, a 33-year-old electrician. You live with your mother who is supportive towards you.

You are attending this appointment today because you have developed a range of physical complaints, which your GP thinks should be reviewed by a psychiatrist.

You were diagnosed with Bipolar Disorder (manic depression) seven years ago. You have had two psychiatric admissions so far since you were diagnosed seven years ago. You were commenced on mood stabilising medication called lithium seven years ago. After the second admission, the dose was increased five years ago, and since then your condition has been stable.

Physical symptoms:

The candidate is expected to ask you questions regarding your physical health. You should not volunteer the following information until asked.

Over the last 4–6 months, you have noticed some physical symptoms. You did not take note of it until your mother started to express concerns about weight loss one month ago.

You last weighed yourself two weeks ago, and noticed that you have gradually lost seven kilograms of weight over six months. There has been no change in your diet. You feel excessively hungry.

You have been sweating excessively, and have found that you are now unable to tolerate heat, and occasionally feel agitated and irritable. Your sleep has been disturbed. You struggle to fall asleep, and you overall sleep for 4–5 hours / night. You thought it could be work stress.

If questioned about any eye problems – you have noticed that you are teary, puffy, and you feel grittiness in your eye.

You suffered severe pain in your knees four weeks ago which your GP diagnosed as arthritis, and started you on pain medications three weeks ago. You have noticed a response to pain medications, and you are not in pain anymore, but have noticed that you feel sick / nauseous, occasional diarrhoea, mentally sluggish, anxious, experience occasional tremors of your hands, and feel quite weak overall. The symptoms have been worse for the last two weeks, and you have been on sick leave.

You have been seeing your GP, Dr Connor regularly. He recently ordered blood tests, and you are not sure about the results.

Psychiatric history:

Seven years ago, you presented with irritable mood, reduced concentration levels, poor sleep and increased energy levels. You were admitted in the hospital for a week, and the doctor told you that you had something called hypomania and started you on lithium tablets, one every morning and two at night. These seemed to help, but made you thirsty and you felt well so you stopped the tablets in six months.

Your second admission was five years ago when you experienced mania which meant you felt very happy for long periods of time, had reduced need for sleep, often felt elated, had racing thoughts, felt restless, overconfident, and spend excessive amounts of money on unwanted things. You were admitted involuntarily for two weeks. At that time, you were restarted on lithium on a higher dose – two tablets in the morning and three at night, you have felt well since and have been taking your tablets regularly. You were monitored by community mental health team for 12 months, and were discharged to GP care. Your GP does a blood test every six months for you, and has said you results are fine, except this last time, when he asked you to see a specialist.

You don't believe you are currently manic or depressed. You are not suicidal. If questioned about psychosis (hearing voices, strange thoughts etc.) – you have never experienced them. You have never been depressed or had a persistently sad mood with loss of energy and enthusiasm, and poor sleep and appetite.

Medical history:

You have not experienced any of these symptoms in the past. You clearly started to notice few physical symptoms 2–3 months ago, but it has been worse over the last three weeks.

You are not allergic to medications.

You are a smoker (20 cigarettes a day). You never used illicit drugs. You drink alcohol socially, 1–2 beers in a fortnight.

4.2 How to play the role:

You will be dressed in casual clothes.

You should present slightly anxious but not uncooperative. Questions regarding your physical health should be answered as scripted. If there is no scripted response to the question you are asked, then you should inform the candidate that you have not experienced that symptom.

You present with some weakness in your arms, and have occasional tremors in your hands. This will be explained to you during the training session.

4.3 Opening statement:

None required by role player.

4.4 What to expect from the candidate:

The candidate should introduce themselves, explain their role and summarise the information they already have about you. They should enquire about some relevant past, current physical symptoms, medications and its side effects. The candidate is to try to link your physical symptoms to medication side effects. They should not ask a detailed history about your previous or current psychiatric history apart from how the medications affected your symptoms and caused side effects.

If the candidate decides to perform a physical examination, say that you are not comfortable. If they continue to perform examination, follow their instructions.

Following their discussion with you and a review of some investigations, the candidate then needs to speak to the examiner to explain their assessment.

4.5 Responses you MUST make:

'I noticed some physical problems six months ago.'

'My physical health has been worse for the last two weeks.'

'I think I have lost seven kilograms in six months.'

'My GP thought I should increase the lithium.'

4.6 Responses you MIGHT make:

If you are asked about your mood or psychiatric history:
Scripted Response: ***'I am not depressed or manic now.'***

If asked about the 'side effects' or 'signs of lithium toxicity':
Scripted Response: ***'What do you mean?'***
(do not offer symptoms until the statement is phrased in a way you believe you would understand as a lay person)

If asked about taking your medications:
Scripted Response: ***'I take them regularly.'***

4.7 Medication and dosage that you need to remember:

Your current medications are:

- Lithium carbonate 500 milligrams mane and 750 milligrams nocte (2 tablets morning, 3 tablets night).
- Paracetamol 1 gram three times / day.
- Celecoxib 70 milligrams twice / day for pain – started four weeks ago by your GP.
- Ibuprofen 200 milligrams, as needed for pain (using most days) – started four weeks ago by your GP.

STATION 7– MARKING DOMAINS

The main assessment aims are to:

- Take relevant history to diagnose hyperthyroidism, which is likely to be lithium induced, and drug interactions leading to lithium toxicity.
- Integrate and interpret findings from history and laboratory tests to make accurate diagnosis.
- Communicate with the patient regarding the nature of his problems and the implications for treatment.

Level of Observed Competence:

1.0 MEDICAL EXPERT

1.2 Did the candidate take appropriately detailed and focussed medical history? (Proportionate value - 30%)

Surpasses the Standard (scores 5) if:
clearly achieves the standard with fluent performance in a range of aspects; demonstrates prioritisation of relevant history related to lithium impact on thyroid functions; identifies that lithium can induce hyperthyroid states; shows in depth knowledge of gathering history of side effects.

Achieves the Standard by:
demonstrating ability to take a focussed history using systemic approach; eliciting relevant history of experience with lithium including side effects, toxicity, adherence, medical history; prioritising the range of hyperthyroidism symptoms; screening questions relating to other physical systems – GIT, CVS, RS and CNS; clarifying important positive and negative features; clarifying timeframes; establishing symptom effect on function.

To achieve the standard ***(scores 3)*** the candidate **MUST**
a. Identify that the onset of hyperthyroidism was prior to commencement of pain medications.

A score of 4 may be awarded depending on the depth and breadth of additional factors covered; if the candidate includes most or all correct elements.

Below the Standard (scores 2):
scores 2 if the candidate does not meet (a) above, or has omissions that would detract from the overall quality response.

Below the Standard (scores 1):
scores 1 if there are significant omissions affecting quality; omissions adversely impact on the obtained content; significant deficiencies such as substantial omissions in history or lack of specificity.

Does Not Address the Task of This Domain (scores 0).

1.2 Category: ASSESSMENT – Data Gathering Content	Surpasses Standard	Achieves Standard		Below the Standard		Domain Not Addressed
ENTER GRADE (X) IN ONE BOX ONLY	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐	0 ☐

1.10 Did the candidate interpret the tests / investigations correctly? (Proportionate value - 20%)

Surpasses the Standard (scores 5) if:
demonstrates a superior performance in correctly identifying the absence of an inflammatory response; identifies hypercalcemia indicative of hyperparathyroidism.

Achieves the Standard by:
accurately interpreting the results as diagnostic of hyperthyroidism, correctly identifying remaining results as normal; considering whether normal ESR & WCC could be significant.

To achieve the standard ***(scores 3)*** the candidate **MUST:**
a. Confirm hyperthyroidism from elevated T3 and low TSH.

A score of 4 may be awarded depending on the depth and breadth of additional factors covered; if the candidate includes most or all correct elements.

Below the Standard (scores 2):
scores 2 if the candidate does not meet (a) above, or has omissions that would detract from the overall quality response.

Below the Standard (scores 1):
scores 1 if there are significant omissions affecting quality; inaccurate or inadequate interpretation of investigations; errors or omissions are significant and do materially adversely affect conclusions.

Does Not Address the Task of This Domain (scores 0).

1.10. Category: DIAGNOSIS - Investigation Analysis	Surpasses Standard	Achieves Standard		Below the Standard		Domain Not Addressed
ENTER GRADE (X) IN ONE BOX ONLY	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐	0 ☐

1.2 Did the candidate take focussed medication history? (Proportionate value - 30%)

Surpasses the Standard (scores 5) if:
obtains a comprehensive history related to lithium induced drug interactions; demonstrates broad knowledge of specific interactions.

Achieves the Standard by:
demonstrating ability to take a focussed medication history; conducting a detailed and targeted assessment of relevant medications linked to lithium toxicity; eliciting key interactions with recently commenced pain medications; demonstrating ability to differentiate symptoms of lithium side effects and drug interactions; identifying the onset of recent symptoms following the commencement of pain medications.

To achieve the standard ***(scores 3)*** the candidate **MUST**
a. Elicit at least four symptoms of lithium toxicity.

A score of 4 may be awarded depending on the depth and breadth of additional factors covered; if the candidate includes most or all correct elements.

Below the Standard (scores 2):
scores 2 if the candidate does not meet (a) above, or has omissions that would detract from the overall quality response.

Below the Standard (scores 1):
scores 1 if there are significant omissions affecting quality; omissions adversely impact on the obtained content; significant deficiencies such as substantial omissions in history or lack of focus on interactions.

Does Not Address the Task of This Domain (scores 0).

1.2 Category: ASSESSMENT – Data Gathering Content	Surpasses Standard	Achieves Standard		Below the Standard		Domain Not Addressed
ENTER GRADE (X) IN ONE BOX ONLY	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐	0 ☐

1.9 Did the candidate describe relevant diagnosis / differential diagnosis? (Proportionate value - 20%)

Surpasses the Standard (scores 5) if:
Demonstrates a superior performance; formulates a differential diagnosis of hyperthyroidism, lithium toxicity due to drug interactions and hypercalcemia – hyperparathyroidism.

Achieves the Standard by:
demonstrating ability to integrate available information in order to formulate a diagnosis; adequately prioritising conditions relevant to the obtained history and findings; explaining relevant predisposing and precipitating factors; accurately outlining the timelines for lithium toxicity development; demonstrating capacity to integrate the early physical symptoms in order to formulate a diagnosis of lithium induced side effects and drug interactions with lithium leading to lithium toxicity.

To achieve the standard ***(scores 3)*** the candidate **MUST:**
a. Diagnose hyperthyroidism and lithium toxicity due to interactions between celecoxib, ibuprofen and lithium.

A score of 4 may be awarded depending on the depth and breadth of additional factors covered; if the candidate includes most or all correct elements.

Below the Standard (scores 2):
scores 2 if the candidate does not meet (a) above, or has omissions that would detract from the overall quality response.

Below the Standard (scores 1):
scores 1 if there are significant omissions affecting quality; inaccurate, incomplete or inadequate diagnostic formulation; errors or omissions are significant and do materially adversely affect conclusions.

Does Not Address the Task of This Domain (scores 0).

1.9 Category: DIAGNOSIS	Surpasses Standard	Achieves Standard		Below the Standard		Domain Not Addressed
ENTER GRADE (X) IN ONE BOX ONLY	5 ☐	4 ☐	3 ☐	2 ☐	1 ☐	0 ☐

GLOBAL PROFICIENCY RATING

Did the candidate demonstrate adequate overall knowledge and performance at the level of a junior consultant psychiatrist?

Circle One Grade to Score	Definite Pass	Marginal Performance	Definite Fail