澳大利亚 John Murtagh 全科病案研究（四十九）
——一位老年病人的急性思维混乱

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【关键词】低钠血症；利尿剂；全科医学
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3 体征

体征发现老人一般躯体状况良好，不过经常对时间、人物和地点出现定向障碍。他的表现提示可能有谵妄的情况，因此对他进行简易精神状态检查。他的生命体征为：体温 37 ℃；脉搏 72 次/分，规律；血压 140/80 mmHg (1 mmHg = 0.133 kPa)；呼吸 14 次/分；血氧饱和度 97%。其他体征包括心血管检查、神经系统检查、呼吸系统检查，结果都正常。血糖仪读数为 6.2 mmol/L。

4 病史

4.1 提问 1：你可以做哪些鉴别诊断？
4.2 提问 2：你应该安排哪些实验室检查？

5 解答

5.1 解答 1：鉴别诊断包括药物不良反应。特别是利尿剂造成的电解质紊乱，镇静剂造成的不良反应。并需要考虑到肾衰竭。
5.2 解答 2：你应该安排如下实验室检查：全血常规检查；尿液检查，包括尿常规和尿培养检查；血清电解质检查；肾功能检查。

6 进一步的病史

实验室检查的结果如下：全血常规检查：正常；尿液检查：正常；血清电解质检查：血钠 120 mmol/L (参考值范围为 134~146 mmol/L)；血钾 4.0 mmol/L (参考值范围为 3.4~5.3 mmol/L)；肾功能检查：尿素 4.5 mmol/L (参考值范围为 3~8 mmol/L)；肌酐 0.07 mmol/L (参考值范围为 0.04~
Case Studies of John Murtagh (49) — Acute Confusion in An Elderly Patient

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[Key words] Hyponatremia; Diuretics; General practice

1 History
A 82 year old man is brought in by his carer daughter because over the past 48 hours he has become lethargic, confused, nauseated and drowsy. He had suffered a stroke 18 months ago but it was not severe and he has been making steady progress and recently felt well up to about 3 days ago. He has not had any falls or incontinence.

2 Medication
His medication is the cholesterol lowering agent simvastatin 20 mg once daily, the diuretic agent indapamide 2.5 mg daily, the hypotonic tenesanpt 10 mg at night.

3 Physical Examination
On examination he looks well physically but is disoriented in time, person and place. The routine mini mental state examination had to be modified as his condition suggested delirium. His vital signs were temperature 37°C, pulse 72/min regular, BP 140/80 mm Hg (1 mm Hg = 0.133 kPa) respiration 14/min, oxygen saturation 97%. The rest of the physical examination including the cardiovascular, neurological and respiratory systems were normal. Blood glucose reading (glucometer) 6.2 mmol/L.

4 Questions
4.1 Question 1: What are your differential diagnosis?
4.2 Question 2: What investigations would you perform initially?

5 Answers
5.1 Answer 1: Differential diagnosis include an adverse drug reaction particularly to the diuretic (including electrolyte disturbance) and the sleeping pill; kidney failure.
5.2 Answer 2: Blood tests to consider are: Full blood examination, urine analysis, serum electrolytes, kidney function tests.

6 Further History
The investigations with normal ranges are as follows: Full blood examination; normal. Urine; normal. Sodium 120 mmol/L (134 – 146 mmol/L), Potassium 4.0 mmol/L (3.4 – 5.3 mmol/L), Urea 4.5 mmol/L (3 – 8 mmol/L), Creatinine 0.07 mmol/L (0.04 – 0.12 mmol/L).

7 Further Questions
7.1 Question 3: What is the most likely cause of low serum sodium (Hyponatremia) in this patient?
7.2 Question 4: What are other causes of Hyponatremia?
7.3 Question 5: How would you manage this patient?

8 Answers
8.1 Answer 1: The most likely cause of this man’s low serum sodium – causing confusion – is his diuretic treatment with indapamide which is a thiazide type drug. Other diuretics can cause this problem so careful follow up of patients on diuretics is important.
8.2 Answer 4: Other causes of Hyponatremia: (1) Inappropriate antidiuretic hormone secretion syndrome e.g. hypothyroidism, lung cancer. (2) Kidney failure to conserve salt e.g. nephritis. (3) Water excess e.g. orally or retention e.g. CCF. (4) Other drugs e.g. ACE inhibitors, anti-epileptics.
8.3 Answer 5: The treatment should be: (1) Stop the suspect drug – indapamide. (2) Admit to hospital. (3) Restrict water and fluid intake. (4) Administer isotonic saline via intravenous drip (if volume depletion).

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