Averting a crisis by ‘add’ing up the clues

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DESCRIPTION
An urgent medical consult was called for refractory postoperative hypotension, without any apparent obvious cause, in a 50-year-old previously normotensive woman following bilateral hip surgery under spinal anaesthesia. Blood pressure was persistently low despite crystalloid fluid boluses and intravenous inotropic support. On examination a cushingoid habitus was immediately recognised, with moon faces, hirsutism (figure 1) purple abdominal striae (figure 2) and a buffalo hump (figure 3). Although the patient denied any exogenous steroids, it was noted that she had been taking medications from a ‘naturopath’ for her joint symptoms for several years which had been stopped a week before the surgery. A bolus of 100 mg hydrocortisone lead to a prompt reversal of blood pressure and inotropic support was withdrawn. The patient was treated with intravenous hydrocortisone followed by oral supplementation with a plan to gradually taper it over 8–12 months. Low cortisol and adrenocorticotropic hormone levels drawn before administration of hydrocortisone confirmed a diagnosis of secondary adrenal insufficiency. Biochemical investigations including electrolyte levels were normal. A sample of the suspect medications was then found to contain dexamethasone on analysis; thus confirming a diagnosis of addisonian crisis due to secondary adrenal insufficiency following inadvertent exogenous steroid administration.

The case has several valuable lessons to share. Hypotension is a common postoperative complication and several common causes need to be ruled out when approaching such patients.1 However in the case described there were clues that pointed to the underlying pathogenesis. The initial presentation of bilateral hip fractures following a trivial fall suggesting severe underlying osteoporosis as well as the classical cushingoid habitus were strong indicators of corticosteroid excess that were unfortunately missed on initial preoperative evaluation. Adrenal insufficiency can be precipitated by the stress of surgery and is life-threatening unless recognised in time and treated emergently.2 The case highlights the relevance of basic clinical skills in the practice of modern medicine. The importance of taking a detailed medication history including medications taken from alternate healers, which are often not volunteered by patients, is also illustrated. Finally the misuse of corticosteroids in some of the medications provided by fraudulent practitioners of medicine has been well reported.3 Efforts to both increase public awareness as well as to crack down on such sham practitioners by the authorities are imperative.

Learning points
▸ Adrenal insufficiency is an uncommon but important differential in approaching patients with postoperative hypotension.
▸ Exogenous steroid administration is an important cause of Cushing’s syndrome as well as secondary adrenal failure.
▸ Increased awareness on the misuse of steroids and appropriate action to prevent it is vital.
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REFERENCES
2 Charmandari E, Nicolaides NC, Chrousos GP. Adrenal insufficiency. Lancet 2014;pii:S0140-6736(13)61684-0.

Figure 3 Collection of an obvious pad of fat around the upper back suggestive of a buffalo hump.