Cushing's Syndrome From Pituitary Microadenoma and Pulmonary Nodules

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A 13-year-old Filipino male patient named T.F. presented with a one-week history of bilateral lower extremity weakness, hyperkalaemia, and hypertension (~140/100 mmHg), leading to hospital admission. He was started on antihypertensives and discharged three days later. His symptoms persisted and bilateral pedal edema developed. An underlying hormone dysfunction was suspected, and additional investigations revealed normal thyroid function, increased adrenocorticotropin-releasing hormone (ACTH), and persistently elevated serum cortisol. He was readmitted to a tertiary hospital. His medical history was unremarkable and included chicken pox as a young child and stunting of growth two years prior to admission, which at the time was not perceived as significant.

Functional health assessment revealed the need for some assistance and/or supervision when performing self-care. His sleep was frequently interrupted by procedures. He described himself as "sad" because of his hospitalization, verbalized missing his family and friends, and cried easily. He tensed when he thought something bad would happen to him, and used prayer to help himself cope. He and his family viewed religion as a significant factor in their life.

Physical examination revealed normal vital signs with an irregular pulse rhythm. However, monitoring revealed hypertensive spikes with periods of tachypnea and isolated premature ventricular contractions on electrocardiogram.

T.F. reported pain to his upper back, rating it as a 4 on a 10-point visual analog scale. His body mass index was 25.04 kg/m^2 (overweight) and truncal obesity was visible. His skin showed good turgor but was thin, dry, and scaly in texture, with acne and hirsutism. He had a poorly healing wound (1 x 1 cm), several reddish-purple striae, and grade 1 pitting edema on his bilateral lower extremities. His nails were pale with smooth, thickened texture. Moon facie and a supraclavicular fat pad also were observed. Chest assessment revealed decreased expansion and breath sounds, with occasional rhonchi and crackles in his left lung. Extremities were thin but with good muscle tone and coordination. Ano-genital assessment revealed undescended testes and a micropenis.

Blood tests showed increased ACTH and cortisol levels, hypokalemia, increased random blood sugar, increased alanine aminotransferase, hypomagnesemia, and hypertriglyceridemia. Free T4 and thyroid stimulating hormone (TSH) were within normal values. Complete blood count revealed increased white blood cell counts with elevated neutrophils and decreased lymphocytes and low levels of red blood