A 45-year-old female referred to the Endocrinology department with clinical features of a cervical hump, suspicious of Cushing’s syndrome. On clinical examination, excessive cervical pad of fat with grade II acanthosis (Fig. 1A) nigricans over the neck region. However, there were no other specific signs of Cushing’s syndrome such as striae, myopathy, ecchymoses, or bruises in the body. Her body mass index was 31 kg/m² and her waist circumference was 98 cm. On detailed history, she suffered from human immunodeficiency virus (HIV) infection and was on tenofovir, lamivudine, and efavirenz containing highly active antiretroviral therapy (HAART) for the past 3 years. Fasting lipid profile showed dyslipidemia with elevated total cholesterol 240 mg/dL, triglycerides 202 mg/dL, and low-density lipoprotein cholesterol 190 mg/dL with low high-density lipoprotein 34 mg/dL. Glycemic parameters including oral glucose tolerance test and hemoglobin A1c levels were within normal range. Hormonal evaluation was done to rule out exogenous and endogenous Cushing’s syndrome. Fasting 8 AM serum cortisol was 15.5 µg/dL (5–25 µg/dL), midnight serum cortisol was 3 µg/dL (normal <7.5 µg/dL), and overnight dexamethasone suppression test revealed suppressed serum cortisol levels 0.8 µg/dL (normal <2 µg/dL). Excessive fatty tissue over the cervical region was confirmed with computed tomography (CT) neck imaging (Fig. 1B). In view of isolated cervical hump and absence of other specific features of Cushing’s with no biochemical parameters suggestive of Cushing’s syndrome, the patient was diagnosed as pseudo-Cushing’s syndrome.

Pseudo-Cushing’s syndrome is defined as some or all clinical features of Cushing’s syndrome with or without biochemical evidence of hypercortisolism. The differential diagnosis of pseudo-Cushing’s syndrome are depression, chronic alcoholism, obesity, uncontrolled diabetes, and obstructive sleep apnea. After the advent of HAART for the treatment of HIV infection, there was a marked improvement in the quality of life as well as the life expectancy of persons living with HIV infection. Meanwhile with long term use of HAART therapy leading to various fat redistribution abnormalities and metabolic complications include diabetes mellitus.

HAART-associated lipodystrophy (LD) is characterized by selective damage of adipose tissue resulting from antiretroviral drugs and also HIV disease per se. LD syndrome encompasses fat redistribution, defined as fat wasting of extremities/face or buttocks, fat accumulation in abdomen or dorsocervical spine (buffalo hump), and metabolic complications like dyslipidemia and hyperglycemia. HAART-associated LD is more common in patients on protease inhibitors group of drugs, however, fat loss has been reported in patients taking nonprotease inhibitors antiretroviral drugs. LD associated with HAART is a difficult condition to manage; choices are either by switching of antiviral drugs and in some cases by reconstructive surgery.

References

Figs 1A and B: (A) Fat accumulation in dorso-cervical spine (cervical hump); (B) CT neck showing excessive fat deposition over the posterior neck region