IMAGE SPOTTER

Clinical Image

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Figure 1: Background

A 40-year-old female was admitted to our facility with complaints of recurrent generalized tonic–clonic seizures. She had a persistent headache with early morning awakening and a history of amenorrhea since 1 year. Visual field examination revealed bitemporal hemianopia. Following neuroimaging, she was diagnosed to be a case of pituitary macroadenoma with hemorrhagic changes (Fig. 1). The hormonal profile showed decreased thyroid stimulating hormone (TSH), luteinizing hormone (LH), and follicle-stimulating hormone (FSH) but normal prolactin (PRL) levels.

Pituitary adenomas are benign tumors of the pituitary gland. If these are more than 10 mm in size, they are referred to as macroadenomas. Symptoms may include headaches, vision problems, weight gain, menstrual irregularities, and lactation. Functionally active adenomas may cause Cushing's syndrome, acromegaly, hyperprolactinemia, or galactorrhea.

Final Diagnosis

Pituitary macroadenoma with hemorrhagic changes.

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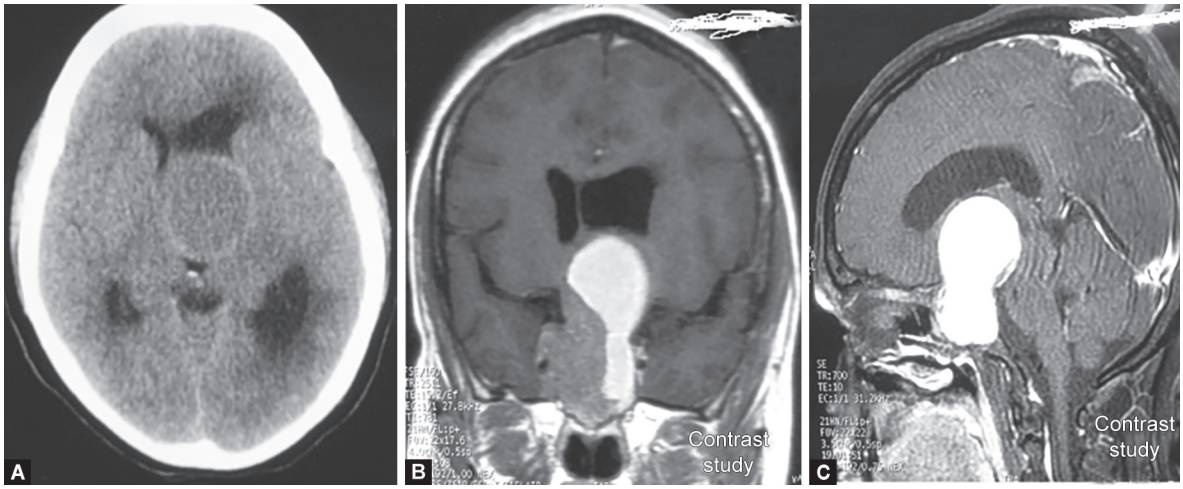
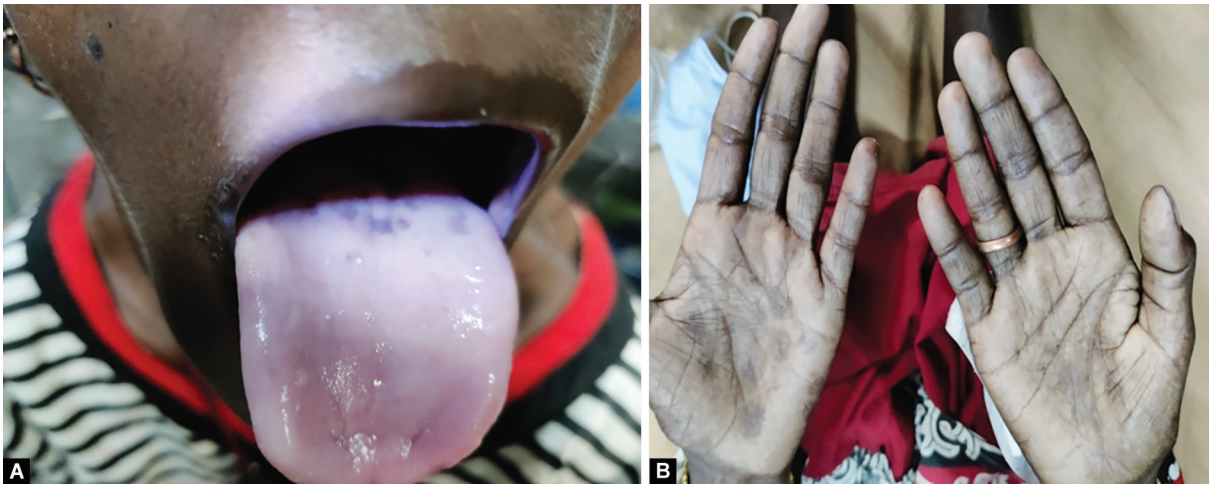
Figure 2: Background

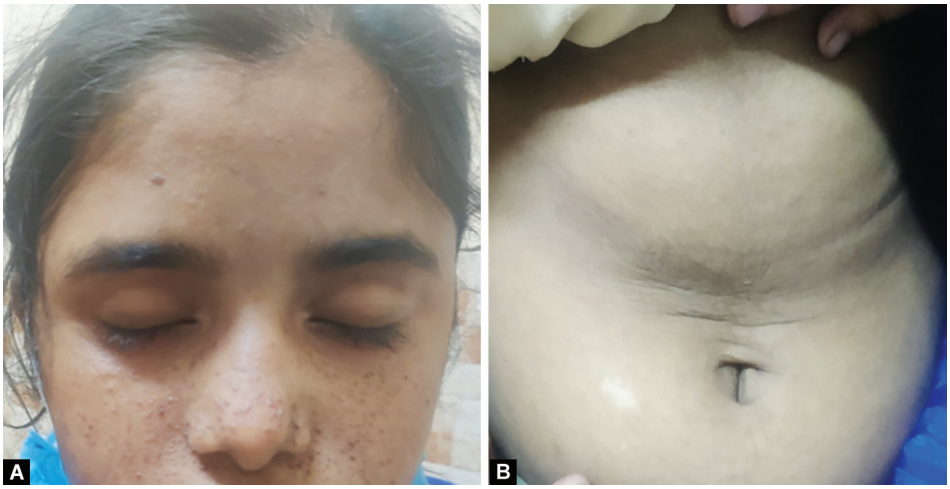
A 44-year-old female presented to the Medicine department with weakness and lethargy for the past 3 months. On examination, her blood pressure was 94/66 mm Hg, and his pulse was 107 beats per minute. Laboratory studies showed a plasma glucose level of 56 mg per deciliter, a sodium level of 126 mmol per liter, and a potassium level of 5.6 mmol per liter. She also reported an unintentional weight loss of 8 kg and progressive darkening of the skin along with creases on the palm and sole. Hyperpigmentation was also noted in the oral mucosa (Fig. 2). Early morning cortisol level was 38 nmol per liter (reference range, 136–540) and the



Figs 1A to C: Axial non-contrast CT brain showing a relatively well-circumscribed midline heterogeneously hyperdense soft-tissue density lesion occupying sellar and suprasellar region showing a mass effect with resultant moderate dilatation of bilateral lateral ventricles (panel A); MRI brain T2 sequence (coronal and sagittal) showing a well-circumscribed heterogenous contrast enhancing mass present within the expanded sella turcica with predominantly peripheral enhancement



Figs 2A and B: Darkening of the skin along with creases on the palm and hyperpigmentation in the oral mucosa



Figs 3A and B: Multiple reddish brown papulonodular lesions on face with a symmetrical distribution known as 'adenoma sebaceum' and hypopigmented patch over abdomen suggestive of 'ash leaf macule'

serum adrenocorticotropic hormone (ACTH) level was 55.7 pmol per liter (reference range, 1.6–14). A diagnosis of Addison's disease (primary adrenal insufficiency) was made, and treatment with glucocorticoids and fludrocortisone was started.

Final Diagnosis

Hyperpigmentation of creases on palm and oral mucosa in Addison's disease.

Figure 3: Background

A 15-year-old female with subnormal intelligence presented with refractory generalized tonic–clonic seizures for 2 years. She had multiple reddish brown papulonodular lesions on his face with a symmetrical distribution. The lesions progressed over a decade and were suggestive of multiple facial angiofibromas misnamed as adenoma sebaceum. A hypopigmented patch over abdomen suggestive of "ash leaf macule" was also present (Fig. 3). A brain imaging revealed multiple subependymal nodules distributed bilaterally. Echocardiography and abdominal imaging were within normal limits. The patient was diagnosed with tuberous sclerosis complex (TSC), and her seizures were controlled with an optimal dosage of three anti-epileptics.

Final Diagnosis

Multiple facial angiofibromas (adenoma sebaceum) and ash leaf macule in tuberous sclerosis.

Figure 4: Background

A 26-year-old female with past history of pulmonary tuberculosis 4 years back presented in the outpatient department of our institution for intermittent fever, night sweats, cough and hemoptysis for the last 1 month. High-resolution computed tomography (HRCT) scan of the lung parenchyma revealed multiple scattered centrilobular nodules, and a branching pattern

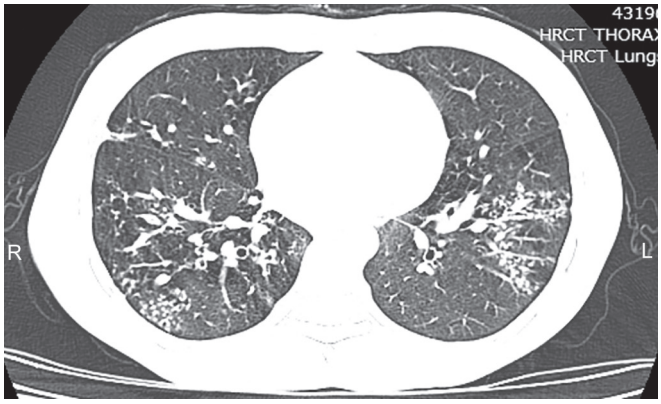


Fig. 4: HRCT scan of the lung parenchyma showing multiple scattered centrilobular nodules, and a branching pattern is predominantly seen in the middle and lower lobes of both lungs suggesting tree-in-bud appearance; linear fibrotic changes with traction bronchiectasis was also seen in the lateral segment of the middle lobe suggesting sequelae of the previous pulmonary tuberculosis

is predominantly seen in the middle and lower lobes of both lungs suggesting tree-in-bud appearance; linear fibrotic changes with traction bronchiectasis was also seen in the lateral segment of the middle lobe suggesting sequelae of the previous pulmonary tuberculosis (Fig. 4). Ziehl–Neelsen staining of sputum sample revealed the presence of multiple acid-fast bacilli, and Cartridge-based nucleic acid amplification test (CBNAAT) for *Mycobacterium tuberculosis* was also positive.

The "tree-in-bud-pattern" describes the CT appearance of multiple areas of small centrilobular nodules with concomitant linear branching opacities resembling a budding tree. Inflammatory bronchioles that represent the "tree" and "buds" are constituted by inflamed alveolar ducts. Though classically described in endobronchial tuberculosis, this pattern has also been reported in other infections, immunologic and connective tissue disorders, obliterative bronchiolitis, panbronchiolitis, aspiration, inhalation, and central lung malignancy involving the peripheral airways.

Final Diagnosis

Tree-in-bud appearance of pulmonary tuberculosis.