Repeated Syncope in a Needle Man

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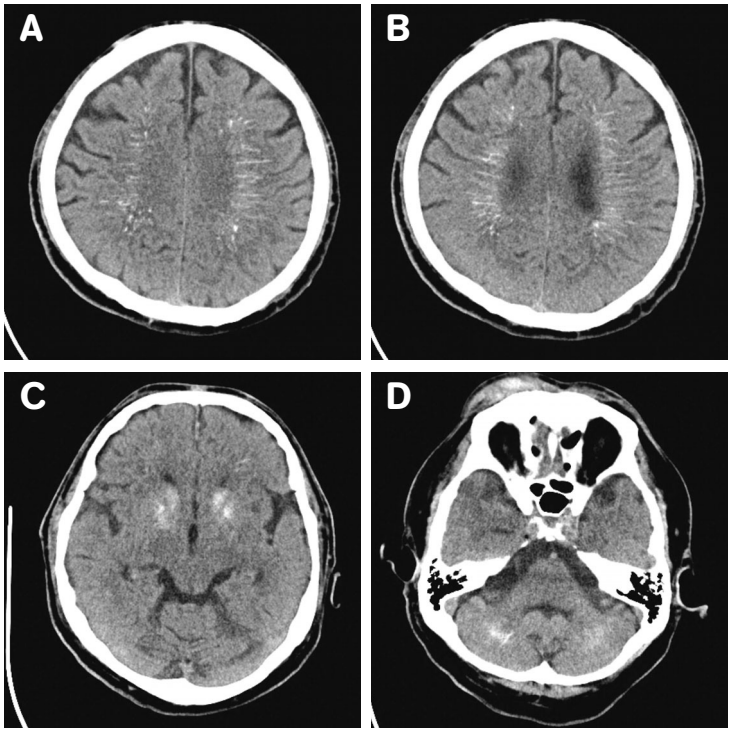

Figure 1.

A 66-year-old man from southern Taiwan was admitted for head and facial trauma after a brief loss of consciousness for less than 1 minutes without any aura while walking. The same episode happened twice in the previous month but the trauma was relatively minor.

His medical record included total thyroidectomy due to thyrotoxicosis 30 years ago and Parkinsonism diagnosed for 6 months prior. Current medications included eltroxin (5 mg once daily) and madopar (125 mg three times daily). Physical examination showed bilateral peri-orbital and cheek ecchymosis, drowsy consciousness, and isocoric pupils with rapid light reflexes. There was also mild limbs rigidity and resting tremor.

Non-contrast computed tomographic (CT) scan of the brain showed facial bone fracture but also found extensive and symmetrical needle-like calcinosis

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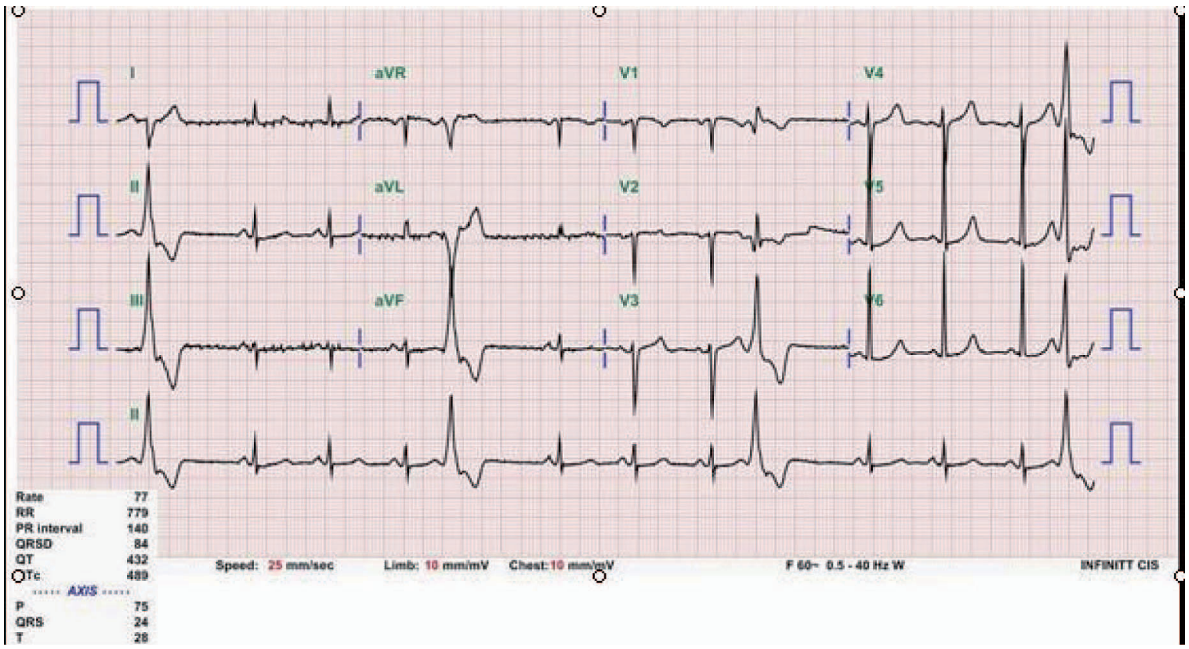

Figure 2.

appearance over the peri-ventricular and gray-white matter junctions, with some calcifications over the basal ganglia and dental nuclei. (Fig. 1A,B,C,D)

Laboratory testing revealed calcium level of 5.6 mg/dl (reference range, 8.4-10.2 mg/dl), phosphate 5.6 mg/dl (reference, 2.3-4.7 mg/dl), magnesium 1.9 mg/dl (1.5-2.2 mg/dl), serum albumin 3.6g/dl (reference, 3.8-5.3 g/dl) and serum parathyroid hormone 4.18p pg/ml (reference, 8-76 pg/ml). Serum thyroxin T4 level was within normal limits (6.2 ug/dl; reference, 4.5-12.5 ug/dl). Electrocardiography revealed multiple monomorphic ventricular premature contractions (VPC) with prolonged QTc interval (0.489sec) (Fig. 2). After supplementation with calcium gluconate 500 mg twice daily and calcitrol 0.25 mcg once daily, the patient was discharged 7 days after admission.

Compared to acute hypocalcemia, chronic hypocalcemia does not manifest as neuromuscular instability, such as paresthesia, muscle twitching, carpo-pedal spasm, Trosseau's sign, Chvostek's sign, seizures, laryngospasm, and bronchospasm[1]. Instead, most chronic hypocalcemia cases appear to be asymptomatic or, as in some case reports[2] like the current one, are associated with calcification over the basal ganglia, thereby causing symptoms like Parkinsonism with limb rigidity and resting tremor. Repeated syncope may be related to hypocalcemia, which cause prolonged QTc interval, possible risk of arrhythmia (i.e. Torsade de points), and monomorphic VPC[3].

It should be emphasized that for patients with previous thyroidectomy presenting with Parkinsonism or repeated syncope, the possibility of hypo-parathyroidism-related hypocalcemia must be considered in the differential diagnosis.

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