Bilateral striopallidodentate calcinosis secondary to postsurgical hypoparathyroidism

Dong-Rong Tsai,1 Shih-Horng Huang,2 Sheng-Hsiang Lin3,4

1Department of Neurology, New Taipei City Hospital, New Taipei, Taiwan
2Department of Surgery, New Taipei City Hospital, New Taipei, Taiwan
3Department of Internal Medicine, New Taipei City Hospital, New Taipei, Taiwan
4Department of Respiratory Therapy, Fu-Jen Catholic University, New Taipei, Taiwan

Correspondence to
Dr Sheng-Hsiang Lin, linsh01@gmail.com

DESCRIPTION
Bilateral striopallidodentate calcinosis (BSPDC) is characterised by calcifications of bilateral basal ganglia and dentate nuclei with or without thalamus, subcortical white matter and cerebellum involvement.1 A computed tomography (CT) is useful in diagnosing and determining the extent of BSPDC.1 Here we report a 48-year-old woman presenting to the emergency department with a sudden onset conscious loss followed by general convulsions. She had undergone a total thyroidectomy for a benign thyroid goitre 20 years ago. A marked decrease in the serum calcium level (4.7 mg/dL) was noted. The diagnoses of hypoparathyroidism and primary hypothyroidism were also confirmed thereafter. A non-contrast head CT (figure 1) revealed symmetric intracranial calcifications, including subcortical white matter, thalami, basal ganglia, caudate nuclei and cerebellums. After the correction of hypocalcaemia with intravenous

Figure 1 Non-contrast head CT showing symmetric calcifications in subcortical white matter (A), thalami (B), basal ganglia (C), dentate nuclei and cerebellums (D).
calcium gluconate, no more seizures occurred and she was discharged 8 days later with long-term oral calcium, calcitriol and thyroid hormone supplement.

About 1% of patients who receive a total thyroidectomy would have permanent hypoparathyroidism, and measuring serum parathyroid hormone and calcium levels postoperatively is mandatory.2 BSPDC, also named as Fahr’s disease, may be an inherited disease or secondary to a variety of disorders, such as hypoparathyroidism, hyperparathyroidism, congenital brain anomalies and systemic lupus erythematosus.1 Among patients with BSPDC, a greater extent of brain calcification indicates a higher probability of having neurological symptoms, of which parkinsonism is the most important presentation.3 Given the irreversibility of BSPDC, hypoparathyroidism should be treated early and a head CT should be considered for patients with neurological symptoms.1 3

Learning points

▸ A substantial proportion of patients who receive a thyroidectomy would develop hypoparathyroidism.
▸ Bilateral striopallidodentate calcinosis is characterised by calcifications of the bilateral striata, pallida and dentate nuclei with or without other intracranial calcifications.
▸ Bilateral striopallidodentate calcinosis may be inherited or secondary to a variety of diseases including parathyroid disorders.