INTRODUCTION

Acquired hypoparathyroidism not related to surgery is most often an autoimmune disease. Permanent hypoparathyroidism can result from immune-mediated destruction of the parathyroid glands. Alternatively, hypoparathyroidism may result from activating antibodies to the calcium sensing receptor that decrease parathormone (PTH) secretion. Autoimmune hypoparathyroidism is a common feature of polyglandular autoimmune syndrome type I, which is a familial disorder. This syndrome typically presents in childhood with candidiasis, followed several years later by hypoparathyroidism, and then adrenal insufficiency during adolescence.

We are presenting here a case of isolated primary hypoparathyroidism in an adult who presented with severe hypocalcaemia.

CASE REPORT

A man aged 42 years, an office clerk by profession, presented with 3 years history of paraesthesias in hands and feet and muscle cramps off and on, progressing to severe carpopedal spasm, a couple of times, relieved by intravenous calcium gluconate at the emergency reception of the hospital. On examination, Trousseau’s sign and Chvostek’s sign were positive. Thyroid gland was not enlarged. Right eye showed mature cataract. Total serum calcium, corrected serum calcium, serum phosphate, ionized serum calcium, serum alkaline phosphatase, serum parathormone (PTH) level were deranged favouring hypoparathyroidism. He was diagnosed to be suffering from isolated primary hypoparathyroidism and put on alfacalcidol and oral calcium carbonate, with which he is asymptomatic now.

Key words: Primary hypoparathyroidism. Hypocalcaemia. Carpopedal spasm. Chvostek’s sign. Trousseau’s sign.

ABSTRACT

A man aged 42 years, presented with 3 years history of paraesthesias in hands and feet and muscle cramps off and on, progressing to severe carpopedal spasm, a couple of times, relieved by intravenous calcium gluconate at the emergency reception of the hospital. On examination, Trousseau’s sign and Chvostek’s sign were positive. Thyroid gland was not enlarged. Right eye showed mature cataract. Total serum calcium, corrected serum calcium, serum phosphate, ionized serum calcium, serum alkaline phosphatase, serum parathormone (PTH) level were deranged favouring hypoparathyroidism. He was diagnosed to be suffering from isolated primary hypoparathyroidism and put on alfacalcidol and oral calcium carbonate, with which he is asymptomatic now.
not reveal any basal ganglia calcification. All other investigations like haematological profile, plain radiographs of chest and abdomen and ultra-sonographic examination of abdomen were unremarkable.

He was diagnosed to be suffering from isolated primary hypoparathyroidism and put on alfacalcidol and oral calcium carbonate. The dose adjusted while monitoring his serum calcium level. On alfacalcidol 1.5 µg daily and 1 g elemental calcium orally daily, he was asymptomatic with a total serum calcium level of 1.83 mmol/l and 24 hours urine calcium excretion was 214 mg.

**DISCUSSION**

Among the symptoms of hypocalcaemia, tetany; papilledema, and seizures may occur in patients who develop hypocalcaemia acutely.\(^5^,\(^6^\) By comparison, ectodermal and dental changes, cataracts, basal ganglia calcification, and extrapyramidal disorders are features of chronic hypocalcaemia. These last findings are most common in patients with hypoparathyroidism. Extensive bilateral cerebral calcifications have also been reported in patients of primary hypoparathyroidism.\(^7^\)

This patient presented with a fairly long history of mild symptoms of neuromuscular irritability and cataract in one eye, but had gradually developed severe hypoparathyroidism and severe hypocalcaemia, so presented with frequent episodes of tetany. Though primary hypoparathyroidism is a chronic disorder but a case like this suggests that the acute clinical signs and symptoms of severe primary hypoparathyroidism are the same as those of acute hypocalcaemia, ranging from tingling to tetany and may be intractable generalized tonic-clonic seizures.\(^8^\)

Polyglandular autoimmune syndrome type I (APS1) is a rare autosomal recessive disorder in which females are affected slightly more frequently than males.\(^2^\) Hypoparathyroidism or chronic mucocutaneous candidiasis is usually the first manifestation, characteristically appearing during childhood or early adolescence. The hypoparathyroidism may or may not occur in association with antiparathyroid gland antibodies that are directed against the calcium-sensing receptor.\(^3^,\(^4^\) Adrenal insufficiency usually develops later, at the age of 10-15 years. This patient is in the fifth decade of life and suffering from isolated primary hypoparathyroidism only.

Most patients with hypoparathyroidism require lifelong calcium and vitamin D supplementation. The goals of therapy are to relieve symptoms, to raise and maintain the serum calcium concentration in the low-normal range, e.g. 8.0-8.5 mg/dl (2.0-2.1 mmol/L), and to avoid hypercalciuria (maintain 24-hour urinary calcium below 300 mg). All patients with permanent hypoparathyroidism require adequate calcium intake (1.0-1.5 g elemental calcium daily).\(^9^\) A variety of vitamin D preparations can be used to treat hypocalcaemia in hypoparathyroidism; active forms of vitamin D3, alfacalcidol and calcitriol are preferred because of their shorter duration of action.\(^10^\)

This patient became asymptomatic on alfacalcidol 1.5 µg with 1 g of elemental calcium daily and his serum calcium was 1.83 mmol/l. Recombinant PTH has also been used to treat hypoparathyroidism but is much more expensive than standard therapy with calcitriol. However, in patients with refractory hypercalciuria, PTH is a reasonable option.

**REFERENCES**