A Rare Presentation of Idiopathic Hypoparathyroidism

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ABSTRACT

Published on 30th December 2014

Breathlesness in a patient with emphysema is often overlooked and many coexisting illnesses are often missed. We report here a case of breath holding spell in an emphysematous patient which turned out to be an inspiratory stridor due to hypocalcemia secondary to idiopathic hypoparathyroidism. This case highlights the importance of clinical skills in this era of evidence based medicine .This case also underlines the fact that stridor can be a presentation of rare diseases and its amenability to complete cure in event of correct diagnosis.

Keywords: Inspiratory stridor, Hypocalcemia, Idiopathic hypoparathyroidism

*See End Note for complete author details

INTRODUCTION

Dyspnoea in an emphysema patient is a common symptom. But when the patient presents with an episodic breath holding spell it points to a different aetiology. It could be a stridor due to turbulent airflow through an obstructed airway. The episodic nature of the event can be attributed to intermittent laryngospasm rather than the common causes of stridor like abscess or swelling of the upper airway, tumors or vocal cord dysfunction Laryngospasm due to hypocalcemia is a rare cause of stridor.[1] The features of latent tetany were elicited in the patient and we went on to search for the cause of hypocalcemia

CASE REPORT

A 52 year old male patient, who is a chronic smoker, presented with breath holding spells for last 8 months. He experienced 6-10 such episodes every day. This occurred even at rest. He also gave history of exertional breathlessness. On further questioning, he gave history of generalised numbness and muscle spasms for the last one year.

On examination he had stable vitals with extensive bilateral rhonchi and barrel shaped chest. In the outpatient department, he had an episode of breath holding spell and was interpreted as an inspiratory stridor. Chovstek's and Trosseau's sign elicited came out to be positive.

We investigated the patient for suspected hypocalcemia. The blood reports revealed a low ionised calcium and a low PTH hormone levels. Serum magnesium was also normal. Serum Albumin was normal. Nofamilial, congenital, autoimmune, infiltrative cause of hypoparathyroidism was found out.

INVESTIGATIONS

Other investigations: Chest X ray showed features of emphysema. ECG and 2D echocardiography were within normal limits.

Table 1. Patient Parameters

Test	Result
Haemoglobin	14.6 g/dl
Total count	10000cells/cumm
platelets	2.4 lakhhs/cumm
Liver function tests	Normal
Renal function tests	Normal
Thyroid function tests	Normal
Fasting serum cortisol	14.9 (5-25ug/dl)2

Table 2. Evaluation of Hypocalcemia

Test	Result
Ionised calcium	2.6 mg/dl(4.5-5.3 mg/dl)
Serum .PTH	3.3pg/ml(15-65 pg/ml)
Serum Magnesium	2.3 mg/dl(1.5-2.5 mg/dl)
Serum.Phosphorous	4.8 mg/dl(2.5-4.3mg/dl)
S.Albumin	4.5 g/dl(3.5-5.5 mg/dl)

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DIAGNOSIS AND TREATMENT

A final diagnosis of idiopathic hypoparathyroidism presenting as inspiratory stridor was made on top of emphysema. Patient showed dramatic improvement on treatment with calcium, Vitamin D 3 and calcitriol.

DISCUSSION

Hypocalcemia leads to increased neuromuscular irritability and may present with circumoral numbness, paresthesias of the hands and feet, and muscular cramps, or when severe, with laryngospasm, focal or generalized tonic muscle cramps, or seizures. Myocardial dysfunction and prolongation of the QT interval may also occur.[1]

Though hypocalcemic stridor is a well- recognized pediatric emergency, it has rarely been reported in the elderly. Isolated cases of stridor due to hypocalcemia secondary to hypoparathyroidism has been reported.[2]

Chronic hypocalcemia is commonly due to inadequate levels of parathyroid hormone.[3] Hypoparathyroidism is a disorder of para-thyroid hormone deficiency caused by two main aetiologies. Autoimmune destruction of the parathyroid glands can occur as an isolated endocrine deficiency syndrome or in connection with failure of other endocrine glands. The other common aetiology of hypoparathyroidism is after neck surgery in which all parathyroid tissue is removed, either in the context of surgery for primary hyperparathyroidism or after extensive neck surgery for thyroid cancer.[4] On the other hand, absence of previous neck surgical procedures, and lack of evidence of any infiltrative or granulomatous diseases make idiopathic hypoparathyroidism most likely as in this patient

Idiopathic hypoparathyroidism can rarely present as stridor,[2] seizures,[5] dementia,[6] and secondary myelofibrosis.[7]

END NOTE

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Conflict of Interest: None declared

Cite this article as: Babu Raj P, Harikrishnan BL, Anand R. A Rare presentation of Idiopathic Hypoparathyroidism. Kerala Medical Journal. 2014 Dec 30;7(4):109-110

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