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Cushing's Syndrome

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Abstract

Aim:-

To review the symptoms,causes and treatment of Cushing's syndrome

Background:-

Cushing syndrome occurs when the body is exposed to high levels of the hormone cortisol for a long time. The causes of this syndrome is related to

1)the use of corticosteroid medication as it has anti inflammatory effect.

2)Tumour in the adrenal cortex.

3)Pituitary tumours produce adrenocorticotropic hormone (ACTH),which stimulates the adrenal glands and cause them to make too much cortisol.

Symptoms include trunk obesity, rounded face, increased fat around the neck, thin arms and legs, fatigue, weakness, high blood pressure, and mood disorders. Children with Cushing's syndrome tend to be obese with slowed growth rates. Treatment is usually based on the cause.One of the treatment for a tumour is surgery to remove the tumour. However pituitary gland is bordered by optic nerves and carotid arteries, there is a risk where these structures could be damaged which can lead to visual loss or a stroke.

Reason:

To understand the causes, symptoms and treatment for Cushing's syndrome.

INTRODUCTION

Cushing's syndrome is a rare condition that occurs due to excess of body cortisol level. Cortisol hormone is a chemical that is normally produced by the adrenal glands and is important for life. This hormone enable us to respond to stressful conditions such as illness or injury, and has impact on almost all body tissues. It is released in varying amounts over the course of the day, highest in the early morning, lowest at night.

This disorder is also called Cushing's syndrome. This syndrome is named after a neurosurgeon, Harvey Cushing who first described the human syndrome in 1932.

There is 2 - 5% prevalence of unsuspected Cushing syndrome in patients with poorly controlled diabetes mellitus[1].

This syndrome is named after a neurosurgeon, Harvey Cushing who first described the human syndrome in 1932.Cushing's syndrome results from sustained pathologic hypercorticolism caused by excessive corticotropin (ACTH) secretion by tumours in the pituitary gland (Cushing's disease, 70%) or elsewhere (15%), or by ACTH-independent cortisol secretion from adrenal tumours (15%). The clinical features are variable, and no single pattern is seen in all patients[2]. Cushing's syndrome is prominent in women than in men and often occurs between the age group of 20 and 40. Endogenous Cushing's syndrome is broadly grouped into ACTH- dependent and ACTH-independent, and is more common in women than in men[3,4]. This syndrome is most commonly caused by the therapeutic administration of exogenous glucocorticoids. Two recent studies found that 2% to 3% of patients with poorly controlled type 2 diabetes mellitus may have unrecognised Cushing syndrome (5, 6).

SYMPTOMS

There are several symptoms of Cushing's syndrome which includes sudden weight gain. Besides, there will be red-purple striae, centripetal obesity, plethoric facial expression, moon facies, hirsutism, red- purple striae,bruising,proximal muscle weakness,psychiatric disturbances, osteoporosis, and menstrual irregularity.

Chronic cortisol excess leads to a typical clinical phenotype with truncal and facial fat deposition, muscle and skin atrophy, although the prevalence of these symptoms can be highly variable and in part related to the underlying cause of Cushing's syndrome. In addition, chronic hypercortisolism is associated with serious morbidity including an increased cardiovascular risk due to multiple risk factors (obesity, diabetes mellitus and hypertension); an increased risk of venous thromboembolism, osteoporosis, and psychological and cognitive disturbances. This multitude of signs, symptoms, and morbidity severely impairs quality of life in patients with this syndrome.

TREATMENT

The aim of treatment of Cushing's syndrome is for the reversal of clinical features, the normalization of biochemical changes with minimal morbidity, and long-term control without recurrence [14]. A number of drugs have been found for the medical management of Cushing's syndrome, but only few have gained wide acceptance.

When an adrenal adenoma produces Cushing syndrome, it is removed by adrenalectomy. However, if surgery is not possible, medications are used to block cortisol production and control hypertension and diabetes. In extremely severe cases of Cushing syndrome, if no source is found, both adrenal glands may be removed and the patient placed on lifelong hormone medications.

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