

Cushing's syndrome diagnosed after delivery: a case report

Case Report

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Abstract: Introduction: During normal pregnancy there are significant changes in hypothalamic-pituitary-adrenal axis, with increased levels of plasma cortisol and adrenocorticotrophic hormone which sometimes reach values observed in patients with Cushing's syndrome. Cushing's syndrome (CS) is rarely encountered during pregnancy, but is associated with serious maternal and fetal complications. Case presentation: A 31-year-old female was admitted to our institution four weeks after delivery. Physical examination revealed moon face, purple striae throughout the abdomen, bruising over the legs, a dorsocervical fat pad and hirsutism. She delivered a eutrophic preterm newborn at 34 weeks gestation, without any maternal or fetal complications during delivery. Imaging showed a mass in the right suprarenal gland with a normal pituitary. After four weeks the patient underwent a right adrenalectomy. The mass was eventually identified as an adrenocortical adenoma. Conclusion: In our case the diagnosis of CS was established only after pregnancy, which enabled the development of numerous adverse consequences secondary to increased plasma cortisol. If CS is recognized during pregnancy, treatment and its timing could be carefully chosen according to the patient's individual characteristics.

Keywords: Cushing's Syndrome • Pregnancy • Delivery • Adrenalectomy.

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List of abbreviations

Cushing's syndrome (CS)
Adrenocorticotrophic hormone (ACTH)
Corticotrophin - releasing hormone (CRH)
Hypothalamic - pituitary - adrenal (HPA) axis
Dexamethasone suppression test (DST)
Oral glucose tolerance test (OGTT)

1. Introduction

Cushing's syndrome (CS) encompasses a cluster of signs and symptoms caused by increased cortisol production in suprarenal gland. A rare disorder with an incidence of 2-3 cases per million, about 0.6 cases per

million are caused by benign adrenal adenomas [1]. Making a diagnosis of CS is not straightforward since frequently not all signs, symptoms and laboratory abnormalities are present [2-5]. Untreated CS is associated with high morbidity and mortality [6]. Major metabolic consequences of increased cortisol are hyperglycemia, increased cellular glucogenesis and increased hepatic gluconeogenesis [7]. Due to increased protein catabolism and negative nitrogen balance, muscular atrophy, osteoporosis and fragility of connective tissue are often encountered. Levels of free fatty acids and cholesterol are increased in plasma, and a centripetal distribution of fatty tissue is characteristic [8-12].

Prolonged exposure to increased plasma glucocorticoids leads to a decrease in glomerular filtration, glomerular dysfunction and albuminuria [13]. Sodium and

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