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RESEARCH ARTICLE

EXCEPTIONAL CASE OF CUSHING'S SYNDROME REVEALED BY AN ACUTE PSYCHOSIS.

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Abstract

Psychiatric symptoms may be part of the clinical manifestations of Cushing's syndrome. Acute psychosis revealing Cushing's syndrome is an exceptional form. This case reported demonstrate the importance of suspecting the diagnosis of Cushing's syndrome in patients with a history of unbalanced diabetes or unstable hypertension with recent changes in their mental health, especially if there are other features of hypercortisolaemia.

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Introduction:

Endogenous Cushing's syndrome results from chronic excess glucocorticoid production from the adrenal glands.It can be adrenocorticotropic hormone (ACTH)-dependent (80 – 85%), or ACTH-independent (15–20%) [1]. It's a rare endocrine disease. The classic signs of Cushing's syndrome include a central obesity with supraclavicular fat accumulation,a cervical fat pad, thinned skin, purple striae,proximal muscle weakness and hirsutism.Other signs may be observed, such as diabetes, high blood pressure, and menstrual irregularity [1].It can present with non-specific symptoms .Cushing's syndrome presenting as acute psychosis is an exceptional occurrence [2].

Case report

A 55-year-old Moroccan woman with a history of unbalanced diabetes and unstable high blood pressure for 04years. She had aggravation of her diabetic hyperglycemia despite several therapeutic adjustments for two months. The evolution was marked by the installation of psychotic disorders with alteration of the general state. The situation was managed in outpatient by several psychotropic treatments without any improvement. Due to the worsening of her condition, she was sent for an endocrinology consultation. The examination found a central obesity with supraclavicular fat accumulation, thinned skin, purple striae, bruising, muscular atrophy of the lower limbs and virilising features: hirsutism and scalp hair loss. Psychiatric symptomatology suggested an acute psychotic disorder. She underwent an acute behavior change with rapid development of agitation, persecutory delusions , auditory hallucinations, insomnia and delirium. Her mood was irritable. She had no history of previous psychiatric disorders. The diagnosis of Cushing's syndrome was suspected and then confirmed with an elevated urinary free cortisol >3000 nmol/24 h (normal range 32–243 nmol/ 24h).The patient was then hospitalized in a specialized unit to supplement the assessment and for management. Biological and radiological investigations confirmed the peripheral origin of Cushing's syndrome and the presence of a left adrenal adenoma at the abdominal computed tomography and magnetic resonance imaging. After unilateral adrenalectomy, the evolution was spectacular; the psychotic symptoms had resolved with good clinical and biological results.

Discussion:-

This case report demonstrates an exceptional presentation of Cushing's syndrome. Psychiatric symptoms during Cushing's syndrome have been described among Harvey Cushing's first observations .The psychiatric symptoms

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usually found with Cushing syndrome are mood disorders; major depressive disorder in 50% to 70% of cases, anxiety in 12% to 79% and hypomania in 3% to 27%. Psychosis and manic access are less common [3,4]. Psychiatric symptoms may precede physical symptoms, creating a diagnostic difficulty. Delayed diagnosis can lead to high rates of morbidity and mortality. Prolonged exposure to glucocorticoids as a result of Cushing syndrome can lead to serious consequences: cardiovascular, immunological and neuropsychiatric complications. Literature reports cases of patients who were admitted to psychiatric units before to diagnosis of Cushing's syndrome [5].There are many differential diagnoses for causes of acute psychosis, especially in the presence of delirium. Hydro-electrolyte disorders, infections, intoxications and withdrawal accidents of psychoactive substances are common. Metabolic, endocrine, autoimmune disorders, cardiovascular etiologies should also be mentioned and neurological causes [6]. Psychiatric symptoms secondary to Cushing syndrome remain resistant to psychotropic drugs with untreated hypercortisolaemia [3] .However the reduction of cortisol levels improves psychiatric symptomatology [7].Some hypotheses have explained the psychiatric symptoms in Cushing's syndrome by the increase net glucocorticoid signalling via the glucocorticoid receptors. The decrease in serotonin activity and the increase in dopamine activity secondary to a change in cortisol activity in the brain were also discussed [8]. The most common cause of Cushing syndrome is the execive use of exogenous glucocorticoids. Endogenous Cushing's syndrome is divided into corticotropin-dependent and corticotropin-independent causes. Pituitary adenoma is the first etiology in corticotrophin-dependent syndrome. For the causes of Corticotropin-independent Cushing's syndrome, adrenal adenoma and adrenal carcinoma are essentially described [9].If there is a clinical suspicion of Cushing syndrome, the diagnosis should be confirmed by a biological assessment including more than one elevated 24-h urinary free cortisol level and/or lack of cortisol suppression after low-dose dexamethasone testing. The central or peripheral origin of Cushing syndrome is confirmed by the determination of the level of ACTH, corticotropin-releasing hormone (CRH) stimulation test, high-dose dexamethasone test and imaging [1].Etiological treatment is essentially surgical: trans-sphenoidal surgery for pituitary adenoma and laparoscopic surgery adrenal tumors [9].This case clearly shows that psychiatric symptomatology including acute psychosis can evoke endocrine pathology such as Cushing's syndrome. The provision of expert advice from an endocrinologist is crucial in this type of situation, as it avoids a diagnostic delay that can lead to a life-threatening prognosis.

Conclusion:-

This article presents a case of acute psychosis secondary to Cushing's syndrome from an adrenal adenoma. The diagnosis of Cushing's syndrome was made only when the mental disorders worsened with alteration of the general state. This case highlights the importance of suspecting the diagnosis of Cushing syndrome in patients with a history of unbalanced diabetes or unstable hypertension with recent changes in their mental health.It also shows the interest of not being limited to a symptomatic psychotropic treatment in this kind of psychiatric manifestations.The demand for a specialize endocrinology exam is essential to avoid the diagnosis delay.

Ethics approval and consent to participate:
Not applicable in this section.

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The authors have consent from the patient to publish.

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All the authors have contributed to the manuscript.

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