



Clinical Case

Neurological Manifestations Revealing a TURP Syndrome

Manifestations neurologiques révélant un TURP syndrome

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Keywords: Trans urethral resection of the prostate, TURP, neurological disorders , hyponatremia

Mots clés : trans urethral resection of the prostate, troubles visuels, confusion, hyponatémie

RÉSUMÉ

The TURP syndrome " Transurethral resection of the prostate " is a complication defined by fluid overload during bladder irrigation to the Transurethral resection of the prostate. We report the case of a 70-year-old patient, who had a transurethral resection of the prostate under spinal anesthesia for benign prostate hypertrophy. In the immediate aftermath of the operation, the patient suddenly presented confusion, nausea and vomiting. Visual blurring and transient bilateral blindness was also reported. Brain MRI did not reveal any diffusion signal abnormalities. The ophthalmological examination revealed bilateral papilledema and the biological workup showed severe hyponatremia at 115mmol /l. The evocative context and the paraclinical data made it possible to retain the diagnosis of TURP syndrome. The management consisted in the correction of hyponatremia. The evolution after 4 days was marked by an improvement of the neurological signs. TURP syndrome is a complication that should be considered during or after urological surgery with fluid irrigation even when the sudden appearance of neurological signs leads to the suspicion of a vascular event.

ABSTRACT

Le TURP syndrome « Transurethral resection of the prostate » est une complication liée à l'absorption massive de liquide d'irrigation et qui survient après une résection transurétrale de la prostate. Nous rapportons le cas d'un patient de 70 ans, qui a bénéficié d'une résection transurétrale de la prostate. Dans les suites opératoires, le patient a présenté de façon brutale une confusion accompagnée de nausées et de vomissements. Un flou visuel suivi d'une cécité bilatérale transitoire a également été rapporté. L'examen ophtalmologique rapportait un œdème papillaire bilatéral et le bilan biologique retrouvait une hyponatémie sévère à 115 mmol /l. Le contexte évocateur a permis de retenir le diagnostic de TURP syndrome. Le TURP syndrome est une complication qu'il faut savoir évoquer même lorsque l'apparition brutale des signes neurologiques fait suspecter un événement vasculaire.

INTRODUCTION

Transurethral resection of the prostate (TURP) syndrome is a known complication of TURP. This syndrome is defined by fluid overload during bladder irrigation, leading hypervolemia and hyponatremia [1]. This syndrome occurring in 1-8% of cases. Visual symptoms and altered states of consciousness have been reported as complications due to intravascular absorption of irrigating fluid [2]. The treatment of severe TURP syndrome is based on correcting electrolytes and making patient hemodynamically stable [3]. We report a case of Gabonese man who presented with a transient bilateral blindness revealing a Turp syndrome.

CLINICAL CASE PRESENTATION

We report the case of a 70 years old, hypertensive and diabetic patient who underwent a transureteral resection of the prostate under spinal anesthesia indicated for benign prostatic hypertrophy. In the immediate postoperative period, approximately two hours after the procedure, the patient had confusion with nausea and vomiting. A transient bilateral blindness was also reported. The blood pressure was at 170/90 mmHg. The capillary blood glucose was normal (114mg /dl). A vascular event was initially suspected. Other differential diagnoses were TURP syndrome and reversible posterior encephalopathy. The emergency brain CT scan was normal and craniocerebral magnetic resonance imaging (MRI) found no diffusion signal abnormalities or hyposignal on apparent diffusion coefficient (ADC) mapping. The ophthalmological examination revealed

bilateral papilledema and the biological workup revealed a severe hyponatremia of 115 mmol/l as the main abnormality. The evocative context and the paraclinical data allowed to retain the diagnosis of TURP syndrome. The patient was transferred to the intensive care unit where the progressive correction of hyponatremia was effective. The evolution was favorable five days later with control of the natremia at 134 Meq/L. The patient was coherent with total disappearance of digestive disorders and neurological signs.

DISCUSSION

TURP syndrome is characterized by the appearance of cardiovascular, respiratory and neurological symptoms. In our case, the sudden onset of neurological symptoms led us to initially suspect a vascular event. Advanced age, arterial hypertension, diabetes, smoking, recent myocardial infarction and a history of stroke are described as risk factors for stroke [4]. Our 70 year old patient had age, diabetes as a risk factor. The initial hypertension was an additional argument to suggest a stroke. The rapid deterioration of the neurological state required brain imaging. Indeed, in case of suspected stroke, recommendations suggest the performance of a CT scan or magnetic resonance imaging (MRI) without contrast to determine the mechanism of the stroke.

However, the diagnosis of TURP syndrome remained very likely with fluid overload in post urological surgery [5]. The clinical manifestations of TURP Syndrome primarily arise from the effects of glycine. Glycine has cardiopressant effects and may have renal toxicity. In the past irrigation fluids have been used that lack the specific toxic effects of glycine. More recently, the increased use of bipolar resectoscopes has enabled the use of electrolyte-containing crystalloid solutions that lack glycine toxicity but may contribute to hyponatraemia. This syndrome manifests itself early within 15 minutes of the start of the resection and up to 24 hours postoperatively with polymorphous cardiovascular, hematological and renal, and neurological symptoms [6]. Cardiovascular manifestations may consist of hypertension bradycardia, dysrhythmia, cyanosis and shock. Hematologic and renal symptoms consist of hyponatremia, acidosis or alkalosis, anemia, and acute renal failure. Neurological symptoms may include nausea, vomiting, confusion, agitation, seizures, paralysis or coma [7]. TURP syndrome is a complication resulting from massive absorption of free water from the irrigation fluid responsible for hypervolemia and especially hyponatremia [8]. Glycocolle have a neurological toxicity. It can provoke transient blindness due to cerebral edema, a decrease in visual acuity or amaurosis by inhibition of retinal synapses [9]. Several factors favor the occurrence of this complication, such as the use of hypotonic solution for irrigation, especially in large quantities, a volume of prostate exceeding 60g, and a duration of the procedure exceeding 60 min [10]. Spinal anesthesia would allow monitoring of neurological signs in an awake patient, and thus accelerate diagnostic and therapeutic management, as was the case in our patient who benefited from rapid management explaining the

moderate nature of the clinical manifestations. The treatment of this complication depends on the severity of the clinical picture [11].

CONCLUSION

Transurethral resection of the prostate is the most common surgical procedure performed on male patients over 60 years of age. The TURP syndrome is an uncommon complication but this diagnosis should be rapid. Here we present a case of severe Turp with neurological disturbance which mimed stroke.

DECLARATION OF COMPETING INTEREST

The authors declare having no conflicts of interest for this article

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