CASE REPORT PROF-1170

HINMAN SYNDROME;
NON-NEUROGENIC NEUROGENIC BLADDER.

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ABSTRACT... hellosurgeon@yahoo.com Inadequate bladder emptying is a common urinary dysfunction in children. Proper evaluation of the child to rule out neurogenic cause is highly desirable before labeling him/her a non-neurogenic neurogenic bladder. This case report describes a male child of 3 years age who presented with clinical features of neurogenic bladder but found to have no neurogenic cause hence diagnosed as Hinman syndrome. After diagnosis he was placed on alpha-adrenergic blocker along with psychological support and showed satisfactory response.

Key words: Bladder, Hinman syndrome, alpha adrenergic antagonists, urinary disorders.

INTRODUCTION

In 1971 Hinman described the non-neurogenic bladder in 14 boys approximately 8 years old who had incontinence, infections and radiographic abnormalities of obstructive uropathy[1]. A new concept was introduced – that the changes were behavioral as demonstrated by their reversal by suggestion (including hypnosis) and by the absence of any detectable neurological or obstructive abnormality.

The main neural circuits controlling the two functions of bladder – that is, storage and voiding are trans-spinal so that intact cord connection between the pons and sacral segments are necessary to sustain physiological control[2].

Non-neurogenic bladder known as Hinman syndrome presents with constellation of findings. This diagnosis is made by exclusion when a child has all the clinical, radiographic and urodynamic features of neuropathic bladder but no neurological pathology is detected[1-2]. These children are typically of school-age and they commonly present with incontinence and/or urinary tract infection. It is now accepted that this syndrome is due to inappropriate contraction of urinary sphincter during voiding resulting in elevation of intra-vesical pressure which leads to common clinical and radiographic signs ranging from distended trabeculated bladder, vesico-ureteric reflux and gross hydronephrosis[3].

CASE REPORT

A male child of 3 years age; who was the only child of family; presented with urinary retention and dribbling after

being circumcised one day ago. Child had an altered personality due to family disturbance, as he was alone with his mother due to service reasons of his father who used to visit family occasionally. Child was delivered by caesarean section and the mother developed serious post-operative complications later on thinking of this child to be the only and last issue. Child was over-protected and he was having complaints of constipation since last one and a half year. His examination revealed distended urinary bladder just below the umbilicus. His systemic examination including perineal sensation, anal tone / reflex and spines were unremarkable.

Child was catheterized for four days followed by its removal keeping in view that this retention might be due to surgical trauma and will settle down at its own. However the child did not pass urine again. He was advised for re-catheterization but was refused by parents thinking it to be painful for the child.

Child remained incontinent (overflow) for four weeks at home after that he was evaluated at our hospital which revealed urosepsis, grossly distended urinary bladder with gross bilateral hydronephrosis on ultrasound.

Patient, provisionally diagnosed, as having posterior urethral valves was later on referred to Armed Forces Institute of Urology Rawalpindi and Agha Khan University Hospital Karachi. His urethroscopy showed no evidence of posterior urethral valves. Cysto-urethrogram revealed distended urinary bladder and posterior urethra with no evidence of mechanical obstruction distal to this. Detailed neurological examination revealed no abnormality.

Keeping in view all these findings he was diagnosed as a case of non-neurogenic neurogenic bladder (Hinman syndrome)

He was catheterized, and placed on Tab Cardura - 0.5mg at bed time in addition to instituting psychotherapy. Antibiotic cover for urinary tract infection & bowel laxative for initial few days were advised.

Child responded well to treatment, his Foley catheter was removed after 02 weeks, Tab Cardura continued for 03 months. After 03 months his investigations revealed complete regression of all backpressure effects on kidneys, ureters, and urinary bladder. He was fully continent after that period.

DISCUSSION

Although the non-neurogenic bladder has been termed the Hinman syndrome, it was first described in 1915 by Beer who reported on four patients with chronic urinary retention and upper urinary tract changes but no evidence of neurological pathology[7].

The diagnosis of non-neurogenic neurogenic bladder is made by exclusion based on clinical, radiological and / or urodynamic findings. Typically there is evidence of severe bladder dysfunction that mimics the effects of 'outflow obstruction' or underlying 'neuropathy'. If neither of these two conditions is present one may use term non-neurogenic neurogenic bladder[1].

In our case, we ruled out neurological cause in initial assessment but outflow obstruction in the form of posterior urethral valves was suspected. It was disproved by urethroscopy / urethrogram. Since this case had severe bladder and renal changes with no evidence of outflow obstruction or neuropathy, we believe that term non-neurogenic neurogenic bladder is appropriate for this case.

Serial studies have been published on non-neurogenic neurogenic bladder[1,2,4]. William et al reported on similar cohort of patient and termed this condition occult neurogenic bladder[5]. Patient tends to be of school going age and often presents with wetting, usually after a period of initial continence. Febrile urinary tract infections are un-common and there is often associated constipation. Stressful social pressures are present in many cases. Our patient was of slightly less age than school going. However, he was continent initially and he was definitely psychologically disturbed due to over-

protected behavior of his family. Child also gave history of constipation since last 1 ½ year.

Although the clinical findings and discordant sphincter mechanism were noted in early studies, Hinman emphasized the importance of psychological factor and thus the syndrome bears his name[4,5]. However, some patients do not have recognizable underlying social and psychological stress including half in series of Allen[6] and a few in that of Williams et al[5] this observation suggest that psychological factors are not necessarily a required pre-requisite for aberrant sphincteric control.

Standard management of Hinman syndrome includes antibiotics, anti-cholinergics, timed voiding and bowel programme[3]. The rationale for administrating alpha blocker therapy in the setting of benign prostatic hyperplasia and urinary obstruction is well established[1]. Furthermore the rationale for giving alpha blocker therapy in the setting of functional outlet obstruction was established by Krane and Olsson[10] who demonstrated that emptying may significantly improve in neurogenic cases treated with non selective alpha blocker[10,11,12].

Intermittent catheterization may be required when there is no response to more conservative measures. In our case antibiotics were prescribed to combat infection in addition to alpha adrenergic blocker and bowel laxative. Child was also psychologically supported.

Surgical intervention without addressing the basic cause has resulted into further deterioration and is not advisable[4].

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