

THE CONSEQUENCE AFTER INTRODUCTION OF CLEAN INTERMITTENT CATHETERIZATION (CIC) IN CHILDREN WITH NEUROGENIC BLADDER DYSFUNCTION SECONDARY TO SPINA BIFIDA. - THE COMPARISON OF PATIENTS WITH AND WITHOUT UPPER URINARY TRACT DILATION AT THE TIME CIC WAS INTRODUCED. -**Hypothesis / aims of study**

The treatment strategies are advocated that the introduction of prophylactic non surgical therapy in children identified as at risk to try to prevent bladder and upper urinary tract deterioration before it occurs. Because expectant treatment has revealed that children with outlet obstruction in the form of detrusor sphincter dyssynergia are at considerable risk for urinary tract deterioration, the idea of treating these children prophylactically has emerged as an important alternative. Clean intermittent catheterization (CIC) have recognized as a safe and reliable procedure for the treatment of lower urinary tract disorders, especially in children with myelodysplasia. The aim of current study was to review the consequence after introduction of CIC in children with neurogenic bladder dysfunction secondary to spina bifida.

Study design, patients and methods

We retrospectively reviewed the records of 34 children (19 girls and 15 boys) presenting our clinic in a 18-year period. The patients were divided concentrating on the radiological upper urinary tract findings when CIC was introduced. 18 children had dilated upper urinary tract. In these patients, 10 children already had dilated upper urinary tract at first visiting to our clinic (group A). In remaining 8 patients, dilatation of upper urinary tract was found out in the course of followup (group B). 16 children had normal upper urinary tract when CIC was introduced. In 7 patients, CIC was applied for post-void residual and urinary tract infection (group C). In remaining 9 patients, CIC were introduced for urodynamically low compliance bladder (group D).

Results

In group A, 5 patients underwent enterocystoplasty and 3 patients underwent anti-reflux surgery consequently. Two patients, including 1 patient who underwent enterocystoplasty, have chronic renal dysfunction. In group B, 3 patients underwent enterocystoplasty and 2 patients underwent anti-reflux surgery. In group C, all patients have normal upper urinary tract. In group D, 8 patients have normal upper urinary tract. However, 1 patients underwent enterocystoplasty for low compliance bladder with vesicoureteral reflux (VUR). Significantly higher bladder surgeries were required in patients who had dilated upper urinary tract when CIC was introduced.

Interpretation of results

In the patients who had dilated upper urinary tract when CIC was introduced, enterocystoplasty or anti-reflux surgery was needed for many patients to prevent upper urinary tract deterioration. The patients whom CIC was introduced for post-void residual and urinary tract infection have not shown any deterioration of upper urinary tract. The efficacy of CIC for incontinence was poor because many patients have urethral sphincter incompetence.

Concluding message

Our findings strongly support the early prophylactic introduction of CIC to reduce the risk of upper urinary tract deterioration, preserve bladder compliance, and reduce the possibility of subsequent adjuvant bladder surgery in children with spina bifida. Even If CIC was introduced with anticholinergic agents, the efficacy for urinary incontinence was unsatisfied.