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Short Report

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Treatment of Clot Retention with Intravesical Streptokinase Instillation: A Case Report

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Clot retention in urinary tract is a rare disorder of which the treatment may be invasive. Streptokinase is a strong fibrinolytic agent with a wide field of use (1-7). In this paper, we present a case with clot retention in the bladder occurred after renal biopsy treated with streptokinase instillation.

Case Report

A fine needle biopsy was performed on a 9-year-old boy who had proteinuria attacks with a diagnosis of nephrotic syndrome. Gross haematuria developed after biopsy. Pelvic ultrasonography (USG) revealed a haematoma of 50 x 68 mm in the bladder (Figure 1). All laboratory findings concerning bleeding diathesis were within normal ranges. After evaluation of the patient, a 10 F foley catheter was inserted into the bladder. A total of 100,000 IU streptokinase was diluted with 100 ml saline, and 30 cc of this solution was infused into the bladder via the catheter, and the catheter was clamped for 60 min. Then, the bladder was irrigated with 0.09% NaCl solution. This procedure was repeated five times at 6-h intervals. After the procedure, the foley catheter was taken out and particles of coagulum were observed in the urine for a period of 8 days. On follow-up with USG, the size of coagulum in the bladder decreased (Figure 2) and completely disappeared. The haematocrit levels were stable during the procedure. Serum coagulation results did not alter.

Streptokinase is a strong fibrinolytic agent used in pleural and pericardial collections, venous thrombosis and the prevention of post-operative adhesions in laparotomised patients (2,5,7,8). Coagulum in the bladder is a rare condition, and cystoscopic intervention is one treatment option (9). We treated our patient with non-invasive streptokinase instillation. Successful treatment of urinary bladder coagulum with this alternative method was reported in four studies (1,3,4,6). The first study included 14 patients and the second was a case report (4,6). The following studies revealed the dissolving of coagulum in the bladder and in the ureter with the instillation of streptokinase from urethral/ureteral catheters (1,3). According to the literature, this treatment was successful in all cases without complications. In our case, streptokinase dissolved the 7 cm coagulum without complications. Although haemorrhage and allergic reactions were reported with the systemic use of streptokinase (2,10), these were not observed during local administration.

In conclusion, local administration of streptokinase is an effective treatment for bladder coagulum and does not lead to complications. This kind of treatment may be a good alternative to the invasive evacuation of bladder clots, especially in children at risks from anaesthesia. Further studies are necessary to determine the indications, dosage and optimal method of treatment in children with bladder coagulum.

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Fig 1. USG before intravesical streptokinase instillation shows 50 x 68 mm haematoma in the bladder.