Life–threatening bleeding nine years after kidney transplantation with Bricker–type ureterointestinal anastomosis

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ABSTRACT
Bricker–type ureterointestinal anastomosis is a widely used technique for performing ureteroenteric anastomosis. In some cases it is the only possible urinary drainage after kidney transplantation for patients with lower urinary tract abnormalities.

A 58–year–old female patient, nine years after kidney transplantation with Bricker–type ureterointestinal anastomosis, with recurrent urinary tract infections, was admitted to the hospital because of severe bleeding through the urostomy. Hemoglobin level was 3.4 g/dl. Patient had also impaired clotting factors and coagulopathy with prolonged prothrombin time due to chronic hepatitis C. Ultrasound and lifesaving laparotomy showed no source of bleeding. During operation bleeding stopped spontaneously and didn’t return again. After surgery also endoscopy through stoma was undertaken. This procedure showed no source of bleeding in intestine and made more probably graft hemorrhage. Graft biopsy showed no signs of rejection. Due to progressive loss in renal function patient needed dialysis again.

The Bricker ileal conduit is a great surgical solution in some patients but like most surgical procedures has both positive and negative implications.
INTRODUCTION

Kidney transplantation is the best method of renal replacement therapy. In patients with lower urinary tract dysfunction it is usually impossible to perform transplantation with ureter-bladder anastomosis. There are several methods of urinary diversion which can be used in that cases e.g. ureterocutaneostomy, ileal conduit, colonic conduit, continent urinary reservoir, ureterosigmoidostomy, ureteroileostomy and many others [1]. In most cases surgeons choose Bricker – type ureterointestinal anastomosis as the best solution. Like most surgical procedures this type of operations has both positive and negative implications. The most common complications after kidney transplantation with Bricker – type ureterointestinal anastomosis are recurrent urinary tract infections [2] or urosepsis [3], renal stone disease [3] and ileus [4].

CASE REPORT

58 y.o. female patient, after kidney transplantation with Bricker – type ureterointestinal anastomosis, admitted to the hospital because of severe bleeding through the urostomy.

Cause of the end stage renal disease was chronic interstitial nephritis. Transplantation was performed nine years ago and because of low capacity of the bladder (50ml) standard urinary drainage was impossible to perform and Bricker – type ureterointestinal anastomosis was made. Patient received daclizumab for induction and was maintained on mycophenolate mofetil, tacrolimus and steroids. Early and long-term post-transplants results were satisfactory (creatinine between 1 to 3 mg/dl). 6 months prior to hospital admission continuous rise of serum creatinine level was observed.

On admission to the hospital patient’s hemoglobin level was 3.4 g/dl. Patient had also impaired cloth formatins and coagulopathy with prolonged protrombine time (INR 2.0) due to chronic hepatitis C. Patient got immediate blood transfusion and received fresh frozen plasma. Ultrasound was made and showed large volume of free liquid in the abdominal cavity but no source of bleeding. The lifesaving laparotomy was performed. There was no blood in peritoneum and the fluid was ascites, probably due to chronic cirrhosis.

During laparotomy bleeding stopped spontaneously. Foley catheter was placed in the Bricker loop to irrigate intestine with saline.

After surgery hemoglobin level was 6.5 g/dl so patient got another blood transfusion. Next day endoscopy through stoma was undertaken. This procedure showed no source of bleeding in intestine and made more probably graft hemorrhage.

Although diuresis was sufficient (about 2000 ml per day) but serum creatinine level rise was observed – before operation was 4.3 mg/dl and was increasing every day. Graft biopsy showed no signs of rejection. Due to progressive loss in renal function patient needed dialysis. The bleeding didn’t return again.

DISCUSSION

Kidney transplantation is surgical procedure with high probability of complications. Most common complications are renal artery or vein thrombosis, urine leak [5], infections (urinary tract infections, viral infections, pneumonia, wound infections) [6] and lymphoceles [7]. When the transplantation is performed with Bricker – type ureterointestinal anastomosis there is also risk of additional complications. This complications are result of procedures performing on intestine and non-physiological drainage of urine and sometimes are unpredictable. However, in some cases of patients with lower urinary tract abnormality, this procedure is the only possible urinary drainage after kidney transplantation. Those patients often decided to undergo that surgery to release them from hemodialysis and improve their quality of life.

CONCLUSIONS

The Bricker ileal conduit is a great surgical solution in some patients but like most surgical procedures has both positive and negative implications.

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