INTRODUCTION

Bilateral renal infarction due to blunt abdominal trauma is rarely seen.\(^1\) Because of its rarity and non-specific clinical presentation, diagnosis of bilateral renal infarction may be delayed. In trauma patients, acute renal infarction is usually presented with symptoms such as acute flank pain or abdominal pain which may also suggest other solid organ injuries.\(^2\)

If renal infarction is unilateral, surgical therapy will rarely be successful. Hence, conservative management can be preferred, but close monitoring is necessary due to risk of hypertension. Surgical therapy is indicated in patients with bilateral renal infarction and in those with injury to a solitary kidney.\(^3\) However, bilateral renal infarction can recover with conservative management, too.

Herein, we report a patient who had bilateral renal infarction due to blunt abdominal trauma and recovered without any problems with conservative management.

CASE REPORT

A 28-year-old man was admitted to the emergency department with lumbar pain owing to a motorbike accident. On clinical examination, abdominal tenderness, pelvic and left cruris pains were present. Erythrocytes, leucocytes and protein was found to be positive in urine analysis. Abdominal computed tomography with intravenous contrast solution showed contrast enhancement in 80% of right kidney, and 30% of left kidney; some intra-abdominal free fluid was also seen. Conservative management was planned for bilateral renal infarction. Urine output was 1.1 L per day. He was discharged on the seventh day of the hospital stay. The patient had not got any problems on the sixth month follow-up. Urine output is a very important parameter for multiple trauma patients. Any decrease in urine output may not be seen inspite of the presence of bilateral renal damage as in the case of the patient, and this situation does not allow ruling out renal injury completely. Hence, emergency physician should still be careful about the risk of renal injury.

Key Words: Kidney.  Infarction.  Trauma.  Bilateral renal infarction.
Traumatic bilateral renal infarction

urine analysis. The patient had no problems on the sixth month follow-up as well.

DISCUSSION

Traumatic renal artery thrombosis which is seen rarely was first defined by Von Recklinghausen in 1861.4 Renovascular injuries and renal infarcts may occur due to blunt abdominal trauma, especially in accidents causing rapid deceleration such as motor vehicle accidents or falls. This may result in total transection of the artery or it may result in tearing of the relatively non-elastic intima and varying amounts of media, leaving the adventitia intact. After that, the intimal injury is followed by sub-intimal dissection of blood with partial or complete occlusion of the vessel. Thus, renal circulation may be impaired.5

The first-ever traumatic bilateral renal infarction case was reported by Steiness and Thaysen in 1965.6 That case was caused by a motorbike accident as in this case. He had flank pain and anuria, but anuria never occurred in this patient. While he had died, our patient is still living and healthy. The reason may be that the renovascular damage of the patient was at the level of segmental and sub-segmental arteries.

The second case of traumatic bilateral renal infarction was reported by Morton and Crawford in 1972.5 That case was also caused by an automobile accident. Oliguria (anuria had developed 12 hours after admission), electrolyte disturbances, increased BUN and Cr levels were seen. The patient needed hemodialysis and peritoneal dialysis. Hypertension was also seen in that patient. But these abnormalities did not occur in this patient. Blood pressure stayed normal on follow-up. Neither hemodialysis nor peritoneal dialysis were needed in this patient.

Although surgical therapy had been performed in both first and second cases of traumatic bilateral renal infarction, this patient's renal injuries healed up with conservative management.

Yet another case of traumatic bilateral renal infarction is a 12 years old boy. That patient needed long-term hemodialysis therapy. Then renal transplantation had been performed.7 A 16 years old girl with bilateral renal infarction owing to blunt abdominal trauma had been treated with bilateral surgical management, and recovered without any problems.8 A 20 years old patient with traumatic bilateral renal infarction had been treated conservatively as in this patient. That patient too had improved well.9

In conclusion, urine output is a very important parameter for multiple trauma patients. It may indicate hemorrhagic shock or renal damage. Any decrease in urine output may not be seen inspite of the presence of bilateral renal damage as in the case of this patient, and this situation does not allow ruling out renal injury completely. Hence, emergency physician should still be careful about the risk of renal injury.

REFERENCES