

ON THE ISSUE OF DIAGNOSIS OF KIDNEY DAMAGE IN CLOSED ABDOMINAL  
INJURIES

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**Abstract:** The article discusses the experience of clinical observation of 117 patients with kidney damage with closed stomach injury. Based on the results of the retrospective analysis, an algorithm of the surgeon's actions at the early stages of diagnosis was developed, which allows for the provision of emergency care.

**Keywords:** Blunt trauma, enal injury, method, surface of the injury.

### INTRODUCTION

At the present stage of surgery, the problem of injuries to the abdomen and retroperitoneal organs remains unresolved, since the frequency of injuries is steadily increasing. Currently, an urgent problem in emergency surgery is the diagnosis of abdominal trauma with damage to the organs of the urinary system [1, 2, 3].

The main cause of blunt abdominal trauma with kidney damage is road traffic accidents [4]. The incidence of damage among patients with abdominal kidney injury is about 3-10% of cases.

### MATERIALS AND METHODS

Diagnosis of traumatic kidney injuries in blunt abdominal trauma is complicated by the characteristics of the injury, depending on which the authors distinguish the following types: a) renal contusion (multiple parenchymal hemorrhages), limited subcapsular hematoma without parenchymal ruptures; b) limited perinephric hematoma, a rupture of the renal parenchyma less than 1 cm deep, not penetrating into the renal cavity system; c) a rupture of the renal parenchyma more than 1 cm deep, which does not penetrate into the renal cavity system; d) rupture of the renal parenchyma, penetrating into the abdominal cavity system of the kidney, damage to the large arteries and veins of the kidney; e) complete crushing of the kidney, separation of the kidney from the renal pedicle [2].

The subjects of the study were 117 patients with various types of closed kidney injuries who were treated in the neurotraumatology, surgical and trauma departments of the Fergana Regional Medical Center in the period 2018-2023.

### RESULTS AND DISCUSSION

As a result of the analysis of the diagnosis of closed kidney injuries, the high information content of radiation research methods was established. With a mild degree of damage, certain difficulties were noted in diagnosing kidney damage. Thus, according to ultrasound data, it was possible to identify renal contusion with limited subcapsular hematomas in 89 patients (90.8%). Contusion with hematomas was not diagnosed in 9 (9.2%). The condition of the patients in group I allowed excretory urography to be performed, while the integrity of the structure and excretory function of the kidneys was not impaired.

In 13 patients of group II with moderate severity of injury, ultrasound was able to identify a limited perinephric hematoma that did not penetrate the renal cavity system and a rupture of the renal parenchyma. Excretory urography was performed in all patients in this group, and according to its data, only the deformation of the pyelocaliceal system was determined.

In case of severe damage, ultrasound data revealed a rupture of the renal parenchyma with damage to the renal cavity system, large vessels of the kidney and complete crushing of the kidney tissue. In this group of patients, it was not advisable to perform excretory urography, since the information content of ultrasound was sufficient to make a diagnosis.

Depending on the nature and severity of the injuries, the patients were divided into the following groups: Group I – mild injuries – 98 patients (83.7%), with renal contusion (multiple parenchymal hemorrhages) limited to - capsular hematoma without parenchymal ruptures. Group II – injuries of moderate severity – 14 patients (11.9%), who had a limited perinephric hematoma, a rupture of the renal parenchyma about 1 cm deep, not penetrating into the cavitory system of the kidneys, and a rupture of the renal parenchyma, not penetrating into renal cavity system. Group III – severe injuries – 5 patients (4.2%) with rupture of the renal parenchyma with damage to the renal cavity system, large arteries and veins of the kidney, with complete crushing of the kidney, separation of the kidney from the renal pedicle.

Patients were admitted with varying levels of consciousness and traumatic shock caused by combined organ injuries. The main methods of examination were objective examination and laboratory examination methods. Among the instrumental methods, ultrasound examination, fluoroscopy of the abdominal cavity and excretory urography were used.

In addition to general clinical research methods, the choice of additional methods is determined by the severity of the patient and the presence of injuries to other organs and systems. Thus, in 78 patients (67.5%) combined injury was recorded, traumatic brain injury of varying severity was in 28 (23.9%), damage to the abdominal organs occurred in 32 (27.3). %, in 8 patients - skeletal injury (6.8%), damage to the chest frame with the development of hemopneumothorax was observed in 10 patients (8.5%).

As a result of the analysis of the diagnostic search in 117 patients with various kidney injuries due to closed injuries, ultrasound was found to be highly informative, which is determined by the accuracy of the study. Thus, in 13 patients (89.9%) it was possible to identify a limited pararenal hematoma and rupture of the renal parenchyma. Rupture of the renal parenchyma with damage to the renal cavity system and complete crushing of the kidney tissue were reliably detected in 4 patients, which amounted to 96.58%.

#### **CONCLUSION**

Thus, in a surgical hospital, the most informative method of research for kidney damage is ultrasound. Excretory urography, despite its diagnostic value, is not always possible.

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