EARLY DIAGNOSIS OF PURULENT FORMS OF ACUTE PYELONEPHRITIS

Qo'ziyev Sohib Saloyiddin o'g'li
Bukhara Innovative Education and Medical University.
Bukhara .Uzbekistan
assistant of the Department of clinical and pre-clinical sciences
Qo'ziyevsohib@gmail.com

Annotation. This article provides an overview of one of the most relevant topics in modern urology – the early diagnosis of purulent forms of pyelonephritis. It presents the current state of the issue and highlights the key debatable aspects of the problem. The article reviews nearly all non-invasive imaging methods for diagnosing various forms of purulent pyelonephritis, demonstrating their capabilities, advantages, and limitations.

Keywords: Acute pyelonephritis, ultrasound examination, calyceal and renal pelvic system, excretory urography.

Acute pyelonephritis (AP) is a bacterial inflammation of the renal parenchyma and collecting system. According to N.A. Lopatkin, pyelonephritis is a non-specific infectious-inflammatory disease of the kidneys, involving the renal pelvis, calyces, and parenchyma, primarily affecting the interstitial tissue. In the final stage of the disease, the process spreads to the blood vessels and glomeruli.Pyelonephritis, which is based on pre-existing organic or functional urinary dynamics disorders, is referred to as secondary. Primary pyelonephritis is characterized by initial infection of the urinary tract. AP can be either diffuse or focal. Purulent forms of AP include abscess, carbuncle, and apostematous nephritis. Pararenal retroperitoneal abscess is a complication of pyelonephritis. Local forms of bacterial inflammation often transform into abscesses, initially small, which then merge to form carbuncles or large abscesses. Acute localized pyelonephritis is a localized form of kidney infection, and in foreign literature, this form is also referred to as acute lobar nephronia, analogous to acute lobar pneumonia.[1]

Some authors consider limited pyelonephritis to be an intermediate stage between simple pyelonephritis and abscess. It is possible that acute bacterial localized pyelonephritis (analogous to a furuncle) represents an early stage in the formation of an abscess, where inflammation has not yet reached the stage of alteration and purulence. In any case, it is often difficult to distinguish a focus of non-specific inflammation from an abscess. However, there is a critical need to differentiate localized serous AP from purulent forms of AP, as this determines the choice of treatment strategy. Simple focal inflammation can be successfully treated with antibiotics, whereas purulent pyelonephritis often requires surgical intervention.[2]

In at least one-third of patients, acute pyelonephritis (AP) immediately develops as a purulent process, such as apostematous pyelonephritis, carbuncle, and abscess. Additionally, 64% of serous AP cases progress to purulent form. The disease is accompanied by pronounced intoxication and often leads to septic shock, with mortality rates ranging from 60% to 92%. The frequency of nephrectomy due to the purulent process in the kidney is 25-50%, and postoperative mortality reaches 18.9-28.7%.[3]

The diagnosis of acute pyelonephritis (AP) is based on a comprehensive approach, including medical history, clinical presentation, laboratory tests, endoscopic, and imaging methods. A review of extensive literature shows that treatment outcomes for AP are significantly influenced by the early diagnosis of its various forms and the extent of kidney parenchymal involvement. This is particularly important for assessing the transition from serous to purulent inflammation, which requires a different treatment approach.[4]

Conclusion. Acute pyelonephritis (AP) is a bacterial infection affecting the renal parenchyma and collecting system, primarily involving the interstitial tissue. It can be primary, with initial urinary tract infection, or secondary, resulting from pre-existing urinary dysfunction. AP can manifest in both diffuse and focal forms, with purulent cases including abscesses, carbuncles, and apostematous nephritis.

The disease can progress rapidly, with 64% of serous cases turning purulent, leading to severe complications such as septic shock and high mortality rates. Early diagnosis, including clinical and imaging methods, is crucial for determining the extent of kidney involvement and guiding treatment decisions. Differentiating between serous and purulent inflammation is key, as purulent forms often require surgical intervention, while focal inflammation can typically be treated with antibiotics.

REFERENCES

1. Карпенко В.С., Переверзев А.С. Лечение гнойного пиелонефрита // Клин. хир. – 1976. – №9. – С.31–38.

2. Лопаткин Н.А. Урология. – М.: Медицина, 1992.

3. Власов П.В., Курбатов Д.Г. Лучевая диагностика острого пиелонефрита // Радиол. - практика. – 2004. – №3. – С.62–68.

4. Быковский В.А. Ультразвуковая семиотика острого пиелонефрита // Ультразвук. диагност. – 1998. – №6. – С.69–74