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Translational Medicine

Short Communication

Management Approaches in Acquired Cystic Kidney Disease and their Treatment Strategies

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DESCRIPTION

Acquired Cystic Kidney Disease (ACKD) is a condition characterized by the development of cysts in the kidneys due to Chronic Kidney Disease (CKD). While ACKD itself may not cause significant symptoms, it can lead to complications such as hemorrhage, infection, or even the development of renal cell carcinoma. In this article, we will explore the treatment strategies and management approaches for ACKD, focusing on both conservative measures and surgical interventions [1,2].

Conservative management

Conservative management plays a crucial role in the treatment of ACKD, aiming to prevent complications and slow disease progression. The following approaches are commonly employed.

Blood pressure control: Hypertension is common in CKD and ACKD. Maintaining blood pressure within the target range, often through the use of antihypertensive medications, is essential to reduce the risk of kidney damage and further cyst development.

Regular monitoring: Regular monitoring of kidney function, including serum creatinine levels and estimated Glomerular Filtration Rate (eGFR), helps to assess disease progression and adjust treatment plans accordingly.

Management of complications: Prompt identification and management of complications such as cyst hemorrhage or infection are vital. Treatment may involve conservative measures, such as pain control, antibiotics, or drainage procedures if necessary.

Surgical interventions

In certain cases, surgical interventions may be required to address complications or manage large or symptomatic cysts. The following procedures are commonly employed:

Cyst decortication: This surgical procedure involves removing the cyst wall while preserving the healthy kidney tissue. It is often performed when symptomatic cysts cause persistent pain or complications such as bleeding or infection [3,4].

Nephron-sparing surgery: If renal cell carcinoma develops within cysts or if cystic masses become suspicious for malignancy, nephron-sparing surgery may be considered. This approach aims to remove the tumor while preserving as much healthy kidney tissue as possible [5].

Renal transplantation: For patients with End-stage Renal Disease (ESRD) due to ACKD, renal transplantation may be the ultimate treatment option. Transplantation provides the opportunity for improved renal function and eliminates the risk of further cyst development [6].

Regular surveillance

Regular surveillance is crucial in the management of ACKD, particularly for patients with CKD and a high risk of complications. The following surveillance measures are recommended:

Imaging studies: Regular imaging studies, such as ultrasound or Computed Tomography (CT), help monitor cyst growth, identify new cysts, and detect any suspicious masses within the cysts.

Renal function monitoring: Close monitoring of kidney function through laboratory tests is essential to assess disease progression and adjust management strategies accordingly.

Urological evaluation: Periodic evaluation by a urologist is recommended, especially for patients with significant cyst burden or those with suspected malignancy, to assess the need for further interventions or surveillance.

CONCLUSION

Acquired cystic kidney disease poses challenges in its treatment and management due to its association with chronic kidney disease. Conservative measures, including blood pressure control and regular monitoring, are essential to slow disease progression and prevent complications. Surgical interventions, such as cyst decortication or nephron-sparing surgery, may be required in

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certain cases to manage symptoms or address malignancy. Regular surveillance through imaging studies and renal function monitoring plays a crucial role in detecting complications and ensuring timely intervention. Collaborative efforts between nephrologists, urologists, and other healthcare professionals are essential to providing comprehensive care for patients with acquired cystic kidney disease, with the ultimate goal of improving patient outcomes and quality of life.

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