

Ultrasonography-guided Intracystic Injection of Appropriate Antibiotics

Valuable for Treatment of Pyocyst in Autosomal Dominant Polycystic Kidney Disease?

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The prevalence of the urinary infections in patients with autosomal dominant polycystic kidney disease (ADPKD) is abnormally high. Pyocyst in patients with ADPKD is a very serious and potentially fatal infection. Diagnosis and treatment of this rare complication is hampered by the problems in the delicate identification of the infected cysts and poor penetration of the systemically used antibiotics into the infected cysts. Limited entry of commonly used antibiotics into the cysts makes these cysts refractory to treatment. Even in the cases of lipophilic compounds, such as ciprofloxacin and new quinolones, trimethoprim-sulphamethoxazole, and chloramphenicol which can accumulate in the renal cysts, therapeutic levels cannot be achieved satisfactorily.¹⁻³ The English literature is scarce about the role of intracystic injection and irrigation of the infected cysts by using the appropriate antibiotics. To our knowledge, no evidence-based data about the efficacy of this method in the treatment of intractable pyocyst in ADPKD has been reported so far.

Recently, we presented a case of ADPKD with refractory pyocyst which was successfully treated with repeated irrigation and drainage of the infected cysts with normal saline solution. We also used povidone iodine in only one of the steps of irrigation.⁴ We believe that ultrasonography-guided intracystic injection of the appropriate antibiotics into the cysts containing echogenic debris and thick septae and irrigation of them in the patients with ADPKD—in whom the high index of suspicion

of having pyocysts will be present—may have beneficial effects in the treatment of the refractory pyocysts. It is a logical and simple proposal, because by means of direct intracystic injection of these agents, better penetration of the antibiotics into the cystic fluid will be achieved; however, exact determination of the role of irrigation of the infected cysts with the ideal antibiotics such as quinolones requires replication in the future investigations.

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