

Commentary

Reliable diagnostic work-up of rare urinary infections

Lundeby et al. give an account of the diagnostic work-up of a rare form of urinary tract infection in a woman in her 60s. She underwent several CT scans, cystography, retrograde pyelography, cystoscopy and two bouts of ureterorenoscopy before a final diagnosis was made. She developed urosepsis as a complication resulting from the ureterorenoscopy.

The patient was referred to a urologist because of recurrent urinary tract infections and haematuria. The diagnostic work-up of urinary tract infections by a urologist normally consists of establishing a urination pattern by means of a micturition diary, investigating the urine stream, measuring residual urine and urine culture. Cystoscopy and X-ray examination are used to look for foreign bodies and obstructions to flow. An assessment of haematuria involves cystoscopy, contrast studies of the upper urinary tract and urine cytology.

A good patient-reported history is of very great predictive value in the diagnosis of urinary tract infections. Recurrent infections over a period of many years, long-term diabetes, abuse of alcohol and smoking are risk factors for emphysematous cystitis and pyelonephritis. A common symptom of a fistula between bladder and bowel is mucous in the urine, which this patient did not have.

It is the responsibility of the attending doctor to assess the benefit and risk to the patient prior to any medical procedure. With respect to diagnostic value, it is not very probable

that air would be transported from pancreas or duodenum to renal pelvis and from there to the bladder of a patient who has not undergone a simultaneous kidney-pancreas transplant. When it comes to the risk of infection complications, the level of contamination of the procedure is the deciding factor (1, 2).

It is usual to differentiate between four levels of contamination: clean, clean-contaminated, contaminated and dirty-infected (2). It may be difficult to find effective prophylaxis against infection for a patient with a long medical history of urinary tract infections, and the most potent antibiotics should be reserved for treating any serious complications (3, 4). Without effective antibiotic prophylaxis, the risk of infection complications is estimated to be up to 5%, 10%, 15% and 40%, respectively, for the various contamination categories. The most serious urinary tract complication is urosepsis, with a mortality of 20–40%, depending on how many criteria for systemic inflammatory response syndrome and multi-organ dysfunction syndrome (MODS) are met (3).

Lundeby's account of the patient illustrates the importance of securing a good self-reported history from the patient and assessing benefit and risk prior to surgical procedures. Diagnosing air in the urinary tract may be a major challenge, but it is symptomatic of the public health service today that we often devote considerable resources to studying findings obtained with sophisticated diagnostic imaging, and that have an uncertain connec-

tion with the patient's problem. A prerequisite for an appropriate work-up is knowing the most probable diagnosis. Emphysematous cystopyelonephritis is a condition more doctors should be aware of.

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