

YOUNG AND SEXUAL ACTIVE WOMEN WITH ACUTE PYELONEPHRITIS: AN OBSERVATIONAL STUDY

Hypothesis / aims of study

The main risk factors for pyelonephritis are: obstructive uropathy, diabetes mellitus, and being older. Moreover, there is a no standard definition of pyelonephritis in literature (1). We did an observational prospective evaluation of all the women admitted to our Department in the last year with a certain diagnosis of pyelonephritis. The aim of the study was to assess the correlations between the renal infection and post coital urinary infection in young women with no associated risk factors for pyelonephritis.

Study design, materials and methods

This is a prospective observational study of all the women admitted to our Department for pyelonephritis from January 2016 to January 2017. All patients had flank pain, fever, positive urinalysis, high blood infection biomarkers, and a CT scan documenting the renal infection. Exclusion criteria were: age > 45 y.o., diabetes, the presence of urinary stones, previous surgery of urinary tract, urinary tract pathology causing obstruction, neurogenic disorders.

All women included in the cohort had to be sexually active.

Results

Of 54 patients admitted for pyelonephritis only 23 women (42.6%) were eligible for the study. The mean age was 31.2 years. None patient reported a history of Low Urinary Tract Symptoms (LUTS).

Post-coital urinary infections were reported in 43.4% of the patients (10/23). In the post-coital urinary infection group 80% (8/10) reported recurrent Urinary Tract Infections (UTI), while in the non post-coital group infection only 23% of the women (3/13) had recurrent UTI. Table 1 reports clinical data.

Table 1. Clinical data.

	Population of women with pyelonephritis	
	Post-coital urinary infection	Non post-coital urinary infection
Mean age (range)	34.1% (18-45)	28.3% (17-45)
Constipation	60% (6)	15.4% (2)
Irregular menstrual cycle	60% (6)	23.1 (3)
Recurrent UTI	80% (8)	23.1 (3)
Proper vaginal hygiene after intercourse	80% (8)	84.5% (11)
Vaginal dryness	40% (4)	38.5% (5)

Interpretation of results

This observational prospective study tried to understand the causes of pyelonephritis in young fertile women without risk factors for renal infection associated. In these patients post-coital urinary infection could be a misunderstood risk factor. Indeed, our data showed a high rate of post-coital urinary infection in young women admitted to hospital for pyelonephritis, four times higher respect to women without post-coital infections. In the group of patients with post-coital urinary infection we found constipation, recurrent UTI, and irregular menstrual cycle rate more common.

Concluding message

Our study shows that comparing sexually active women in a childbearing age, without specific risk factors for pyelonephritis, more common associated risk factors was the post-coital urinary infections. In these patients we found a higher rate of constipation, recurrent UTI, and irregular menstrual cycle.

References

1. 1. Febrile urinary tract infections: pyelonephritis and urosepsis. Schneeberger C1, Holleman F, Geerlings SE. *Curr Opin Infect Dis.* 2016 Feb;29(1):80-5.

Disclosures

Funding: no source of funding or grant **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** Observational study **Helsinki:** Yes **Informed Consent:** Yes