

Urinary Tract Infections (UTI) at Elderly People

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Abstract

After respiratory tract infections, urinary tract infections (UTI) are the most common cause of illness in persons in aging time. During 2017-2019 we have studied 100 UTI patients, on age over 60 age, 68 men and 32 female with urinary catheter, diabetes mellitus, high blood pressure, or prostate and kidney affection, concerning diagnosis, treatment, and prevention of reinfection. The symptoms among these included: frequency, dysuria, urgency, suprapubic pain, cloudy and/or foul-smelling urine, hesitation to pass urine, fever (>38°C), chills, incontinence, not feeling well, confusion, agitation, change in appetite. The following uropathogens were cultured: *Escherichia coli*, *Proteus spp.*, *Klebsiella spp.*, *Pseudomonas spp.*, *Enterobacter spp.* Three main types of UTIs were found: cystitis (65 cases), urethritis - prostatitis (25 cases) and pyelonephritis (10 cases). The recommended therapy according to susceptibility testing was: ampicillin mostly associated with an betalactamase inhibitor, cipro / norfloxacin, pivmecillinam, nitrofurantoin and trimethoprim in combination with sulphamethoxazole. A follow-up culture after 10 days after therapy showed: bacterial eradication (85 cases), recurrence of the same bacterial species (15 cases) and no new reinfection. UTI in elderly is a complex problem for diagnosis, treatment, and prevention. Most of them are painful and bothersome, but usually treatment is successful with appropriate antibiotics.

Keywords: UTI; Elderly people; Study population

1. Introduction

Urinary tract infection at elderly are common among old age persons and often lead to acute illness in the elderly, generally affecting more women than men. Re-infections or relapses of UTIs are common [1]. Older adults at greater risk for getting an elderly urinary tract infection include: those who require a catheter in the urethra and bladder, diabetics, anyone with kidney stones, and women who have gone through menopause [2]. The recognized prevalence of UTI increases in both sexes with age; the female:male ratio is 2:1 in the elderly. UTI in older persons can be a complex problem in terms of the approach to

diagnosis, treatment, and prevention [3]. A diverting stoma is significantly known to reduce the consequences of distal anastomotic failure following a colorectal surgery. In order to use a diverting stoma a strict and well-studied plan should be followed to avoid unnecessary complications.

2. Material and Methods

Because of the high incidence of urinary tract infection in elderly in our region, during 2 years long, 2017-2019 it was studied this infections, at 100 patients, 32 females and 68 men. It was observed all appeared symptoms as even the uropathogen microbial flora and its antibiotic susceptibility. The microbial strains were isolated on EMB medium and were identified by using the biochemical screening tests for Gram-positive bacteria and Gram-negative bacilli.

3. Results and Discussions

3.1 Study case situation

UTI was present at 32% female and 68% men with 53% Urban provenience and 47% Rural one (FIG. 1).

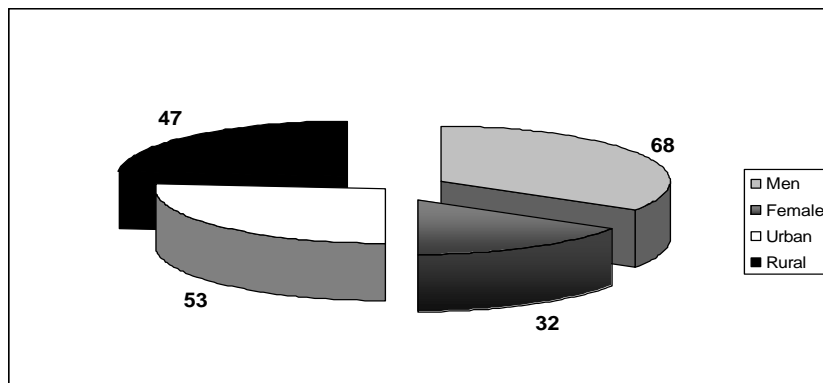


FIG. 1. Case aspects.

3.2 Situation of the UTI status

The urinary tract includes from anatomical point of view, two kidneys, two ureters, a bladder, and a urethra (FIG. 2).

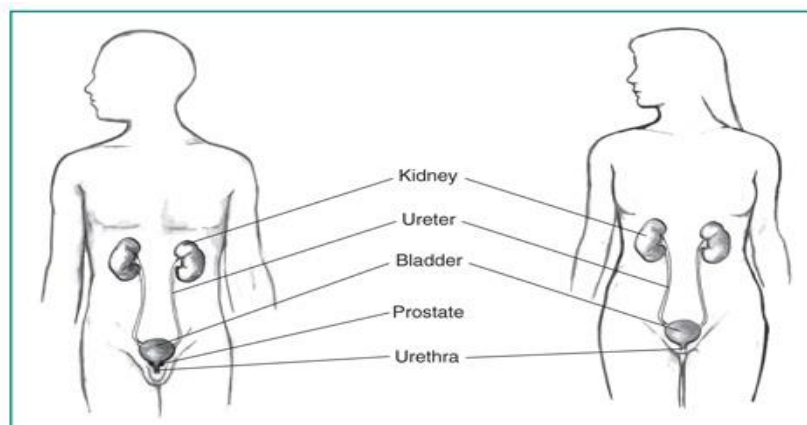


FIG. 2. Male and female urinary tracts.

There are several main types of UTIs possibilities, as lower tract and upper tract one, with clinical aspect for: cystitis, urethritis and pyelonephritis. There were found: cystitis -65 cases, urethritis-prostatitis -25 cases and pyelonephritis -10 cases.

3.3 Age characteristics of UTIs

It was analyzed at several elderly age group the urinary tract infection presence (FIG. 3) and the most cases appeared at the 60-65 group one with 55% of cases and in special at men.

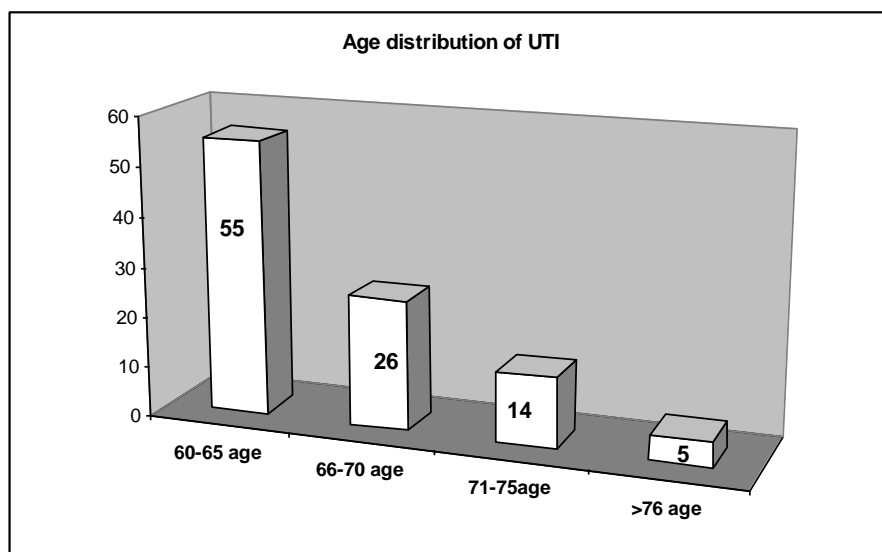


FIG.3. Case distribution.

3.4 Symptoms of the identified urinary tract infections

This presented symptoms were: frequent need to urinate, painful, burning sensation in the area of the bladder or urethra during urination, Cloudy, foul smelling urine, having the feeling of having to pass urine, but unable to do so or passing only a small amount, chills, fever(>38°C) - may mean that the infection has reached the kidneys, lower abdominal pain or pain in the back (flank) below the ribs, the need to hurry to get to the bathroom in time to urinate (Sometimes recent onset incontinence may occur), blood or pus in the urine, not feeling well, confusion, agitation, and delirium, change in appetite, functional decline. Urine culture was the usual method for diagnosis and in all cases it showed out more than 100. 000 germens /mm³, in the morning urine. Then a urine culture revealing a bacterial count of 100,000/ml or more, with symptoms, confirmed always our UTI diagnosis.

3.5 Micro-organisms who caused UTIs

Several micro-organisms are known to cause UTI and in our case we have found out: *E. Coli sp.*, *Klebsiella sp.*, *Pseudomonas sp.*, *Proteus sp.*, and *Enterobacter sp.* (FIG. 4). Most representative were for the etiology of the urinary tract infection at the patients the presence of *E. coli* species. *E. coli* accounts for more than 70% of bacteriuria in elderly female outpatients with uncomplicated sporadic cystitis and for about 40% in men patients with indwelling bladder catheters, or complicated infections. In patients with recurrent infections, *E. coli* tend to predominate.

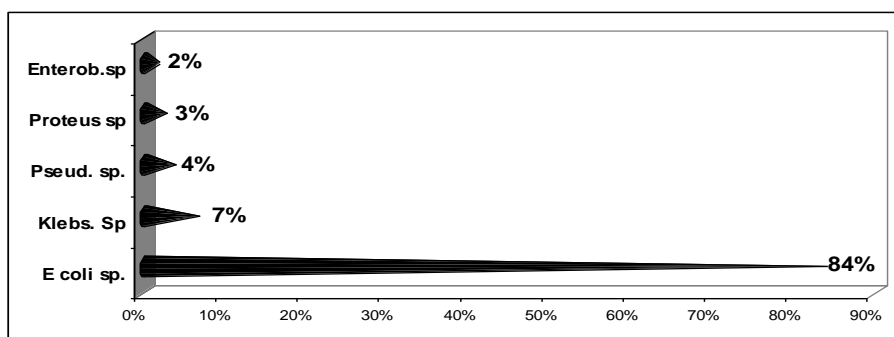


FIG. 4. Repartition of the UTI microorganisms.

3.6 Treating UTIs

Most UTIs are painful and bothersome, but usually they can be successfully treated with antibiotics. A list of the antibiotics that are specific for treating UTIs would be lengthy [4]. All drugs for this infections required a prescription from a physician and were done after a serious laboratory determination work [3]. The recommended therapy according to susceptibility tested was: ampicillin mostly associated with an betalactamase inhibitor, cipro / norfloxacin, pivmecillinam, nitrofurantoin and trimethoprim in combination with sulphamethoxazole (FIG. 5).

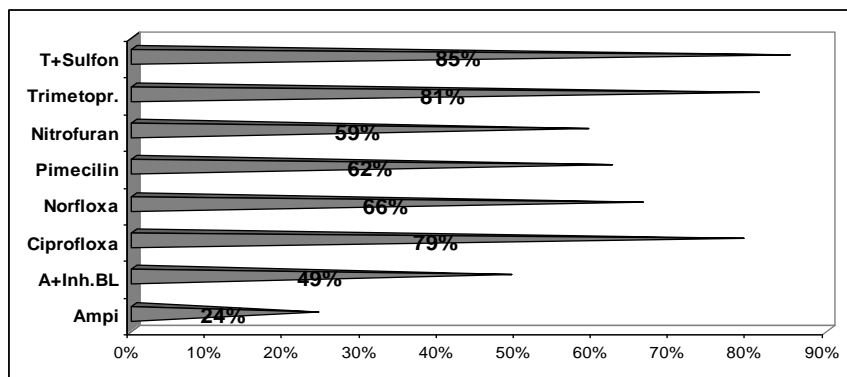


FIG. 5. Tested antibiotics susceptibility.

A follow-up culture after 10 days after therapy showed: bacterial eradication (85 cases), recurrence of the same bacterial species (15 cases) and no new reinfection.

4. Conclusions

UTI in elderly is a complex problem for diagnosis, treatment, and prevention. Most cases appeared at the 60-65 age group. The recommended therapy according to susceptibility tested was almost heterogenic.

REFERENCES

1. Costica I. *Kidney Diseases for All*. Arizona: MAST, USA; 2011. 127-52 p.
2. Deac LM. *Health education in a general sense*. Cluj-Napoca: Editura Dacia, Romania; 2010. 209-11 p.
3. Hanno I. *Clinical manual of urology*. Philadelphia: Saunders, USA; 2009.
4. Peterson R. *Urologic Pathology*. Bucharest: Editura Medicala Callisto, Romania; 2009. 225-73 p.