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## RELATIONSHIP BETWEEN ARTERIAL HYPERTENSION AND RENAL DAMAGE IN PATIENTS WITH RECURRENT URINARY TRACT INFECTIONS

### Hypothesis / aims of study

Urinary tract infections (UTI) are the second most common infection in humans. Some investigations have addressed the long-term predisposition of women with recurrent urinary tract infections (RUTI) to develop HTN. We investigated the differences in the prevention of permanent renal damage attributable to RUTI with a continuous antimicrobial pattern versus prophylaxis with a polybacterial vaccine.

### Study design, materials and methods

Retrospective multicentre study: 1000 women who had their renal function monitored between April 2003 and December 2015. Study groups: GA: women with RUTI treated with conventional suppressive treatment (n=350), GB: women with RUTI treated with polybacterial vaccine (n=350), GC (control group): women without RUTI with urinary incontinence without any other urological disorder (n=300). Data recorded: Age, secondary diagnoses, concomitant treatments, toxic habits, medical and surgical background, obstetric-gynaecological background, physical examination, urinalysis, urine culture, ultrasound, follow-up time, number of UTI, initial (FG1) and final (FG2) glomerular filtration. Exclusion factors: urinary lithiasis, neurogenic bladder, immunodepression.

### Results

Mean age 59.01y (18-85), similar for all groups (p=0.5276).

GA: statistically significant differences were found in the FG1 values of patients with and without HTN (p<0.0001). Also in the FG2 values of patients with and without HTN (p<0.0001).

GB: differences were found in the FG1 values in patients with HTN (mean 85.95) and without HTN (mean 100.12)(p<0.0019). Also in the FG2 values of patients with HTN (mean 88.32) and without HTN (mean 98.64) (p<0.0198).

GC: no differences were found between patients with and without HTN in the FG1 (p<0.2622) and FG2 values(p<0.3762).

### Interpretation of results

At the moment, it is not well defined the impact of RUTI on renal damage. Some studies with 12 years of follow-up have shown that RUTI could be an independent risk factor for developing HTN in the long term. On the other hand, it is well known that HTN causes renal damage. It is interesting to define if there is any physiopathological link on the renal damage of HTN and RUTI in order to develop strategies for its management and prevention.

### Concluding message

After 12 years of prophylactic treatment, FG drop is greater in women treated with antimicrobial agents than in women treated with vaccine.

The prophylaxis with the polyvalent bacterial vaccine is useful in the prevention of the renal damage attributable to RUTI.

HTN may lead to a drop in the glomerular filtration as an independent factor, affecting to both prophylactic patterns.

### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** IRB of the University Hospital of Salamanca, Salamanca, Spain. **Helsinki:** Yes **Informed Consent:** Yes