

# BACTERIURIA ASINTOMATICA CUANDO TRATAR??

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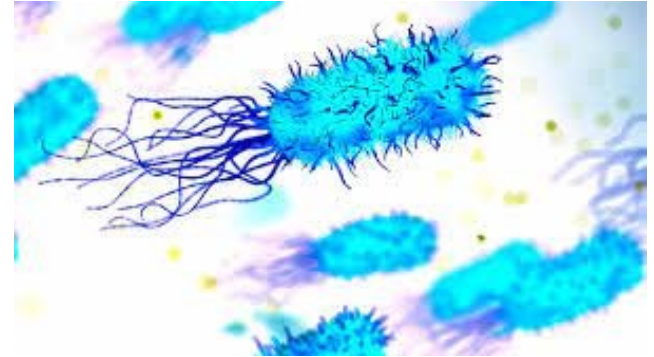
- Jesus Tapia Garcia
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SPEAKER PARA MSD  
ASESORIA CIENTIFICA ZAMBON

Identificación: 22431133

Convenio: MUTAR SER PGP BARRANQUILLA

Edad/Sexo:

70 / F

ANALISIS	RESULTADO	UNIDADES	VALORES DE REFERENCIA
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**MICROBIOLOGÍA**

**UROCULTIVO ANTIBIOGRAMA CONCENTRACIÓN MINIMA INHIBITORIA AUTOMATIZADA**

Resultado **RECuento 100.000 UFC/ML**

Microorganismo Aislado **Escherichia coli**

Marcadores de Resistencia **Betalactamasa de Ampilo Espectro**

**OBSERVACIONES**

**BETALACTAMASA DE ESPECTRO EXTENDIDO POSITIVA:** Se confirma la presencia de un germen productor de betalactamasas de espectro extendido. No se recomienda el uso de antibióticos del grupo de cefalosporinas de primera, segunda, tercera y cuarta generación y aztreonam en infecciones moderadas a severas.

Antibiotico	Interpretación	CMI
Ampicilina	R	>16
Amoxicilina-Clavulanato	I	16/8
Amikacina	S	<=8
Ciprofloxacina	R	>2
Cefuroxima	R	>16
Cefazolina	R	>16
Nitrofurantoina	R	>64
Gentamicina	R	>8
Norfloxacina	R	>8
Trimetoprim-Sulfametoxazol	R	>2/38

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ANÁLISIS	RESULTADO	UNIDADES	VALORES DE REFERENCIA
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**MICROBIOLOGIA**

**UROCULTIVO ANTIBIOGRAMA CONCENTRACIÓN MINIMA INHIBITORIA AUTOMATIZADA**

Resultado    **RECuento 100.000 UFC/ML**  
Microorganismo Aislado                          **Escherichia coli**

Marcadores de Resistencia                      **Test negativo para Betalactamasa de Espectro Extendido**

Antibiotico	Interpretación	CMI
Ampicilina	R	>16
Amoxicilina-Clavulanato	S	<=4/2
Amikacina	S	<=8
Ciprofloxacina	S	<=0,125
Cefuroxima	S	<=4
Cefazolina	S	<=2
Nitrofurantoína	S	<=16
Gentamicina	S	<=2
Norfloxacina	S	<=2
Trimetoprim-Sulfametoxazol	S	<=0,5/9,5

# CASO CLINICO

PACIENTE M DE 69 A SONDADO CRONICO HACE 1 AÑO ANTECEDENTE DE HPB EN MANEJO CON TAMSULOSINA.

CLINICAMENTE ASINTOMATICO , NO FIEBRE , NO EQUIVALENTES FEBRILES.

UROCULTIVO TOMADO DEL RESERVORIO DE LA SONDA.

A INICIARIAS MANEJO ANTIBIOTICO?

1. SI
2. NO

# ITU

## DEFINICIÓN

Comprenden una gran variedad de entidades clínicas cuyo común denominador es la **invasión bacteriana del parénquima renal y/o sus vías de excreción.**" (1)

ITU

No complicada

- ❖ Mujeres.
- ❖ Sin alteraciones anatómicas y funcionales.
- ❖ Sin instrumentación previa.

Complicada

- ❖ Hombre.
- ❖ **Inmunosuprimido.**
- ❖ **Enfermedad Renal.**

# PRINCIPAL AGENTE ETIOLOGICO



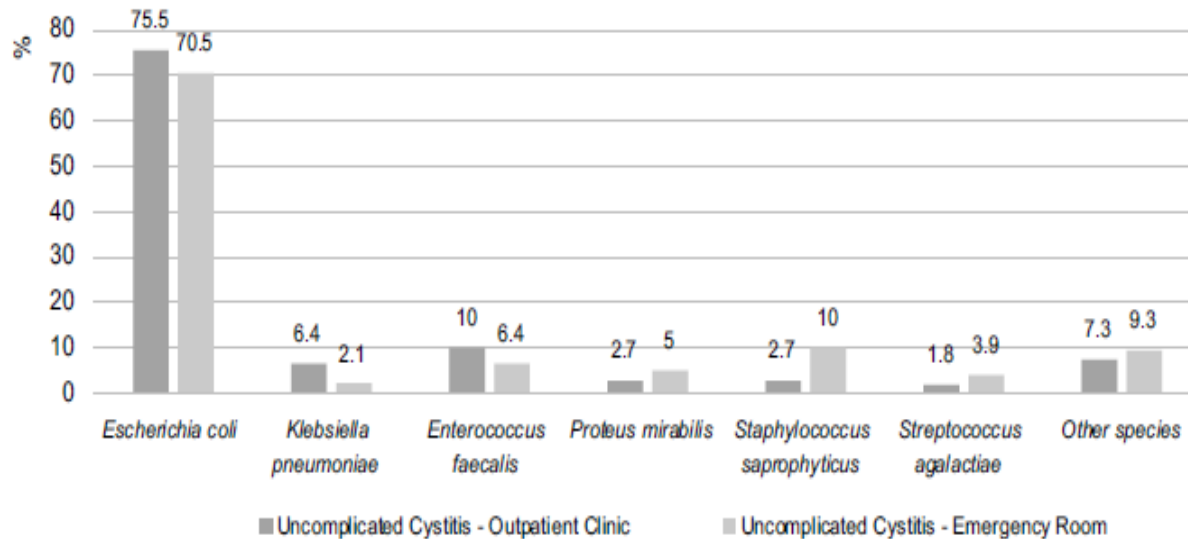


Fig. 1 - Etiology distribution of uncomplicated cystitis in outpatients and emergency room patients in a quaternary hospital of São Paulo (2007–2012). Adapted from Hisano et al.<sup>21</sup>



**Tabla 1.** Frecuencia de microorganismos causantes de IVU en Colombia.

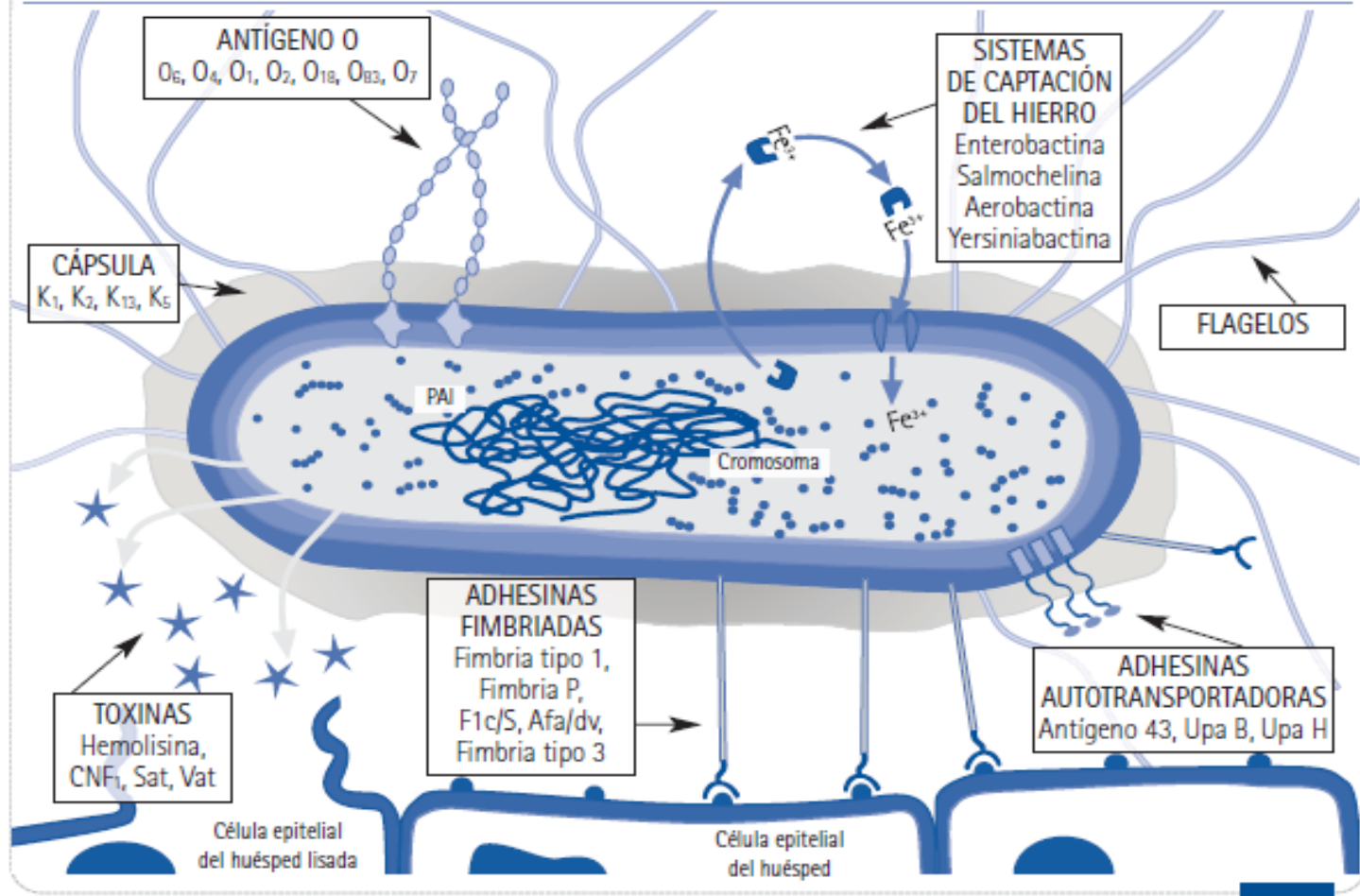
Microorganismo	Aislamientos (%)						
	Bogotá 2002-2003 <sup>40</sup>	Barranquilla 2006 <sup>41</sup>	Medellín 2011-2012 <sup>42</sup>	Cali 2014 <sup>43</sup>	Risaralda 2015 <sup>44</sup>	Cartagena 2016 <sup>45</sup>	Bucaramanga 2017-2018 <sup>46</sup>
<i>Escherichia coli</i>	88.9 %	85.47%	68.9%	61.8%	72.6%	64.63%	83%
<i>Klebsiella spp.</i>	3.7%	1.75%	8.1%	15.4%	10.9%	14.66%	15%
<i>Proteus spp.</i>	5.1%	5.29%	3.3%	-	4.9%	2.78%	1%
<i>Pseudomonas aeruginosa</i>	-	0.34%	1.8%	4.5%	3.3%	10.86%	-
Grupo SPACE **	2%	4.32%	1.2%	5.2%	5.4%	7.33%	1%
<i>Enterococcus spp.</i>	-	-	10.7%	-	1.2%	3.28%	-

\*Los estudios registrados analizaron pacientes con IVU complicada y no complicada

\*\* Se Incluye: *Serratia spp.*, *Providencia spp.*, *Morganella spp.*, *Acinetobacter spp.*, *Citrobacter spp.* y *Enterobacter spp.*

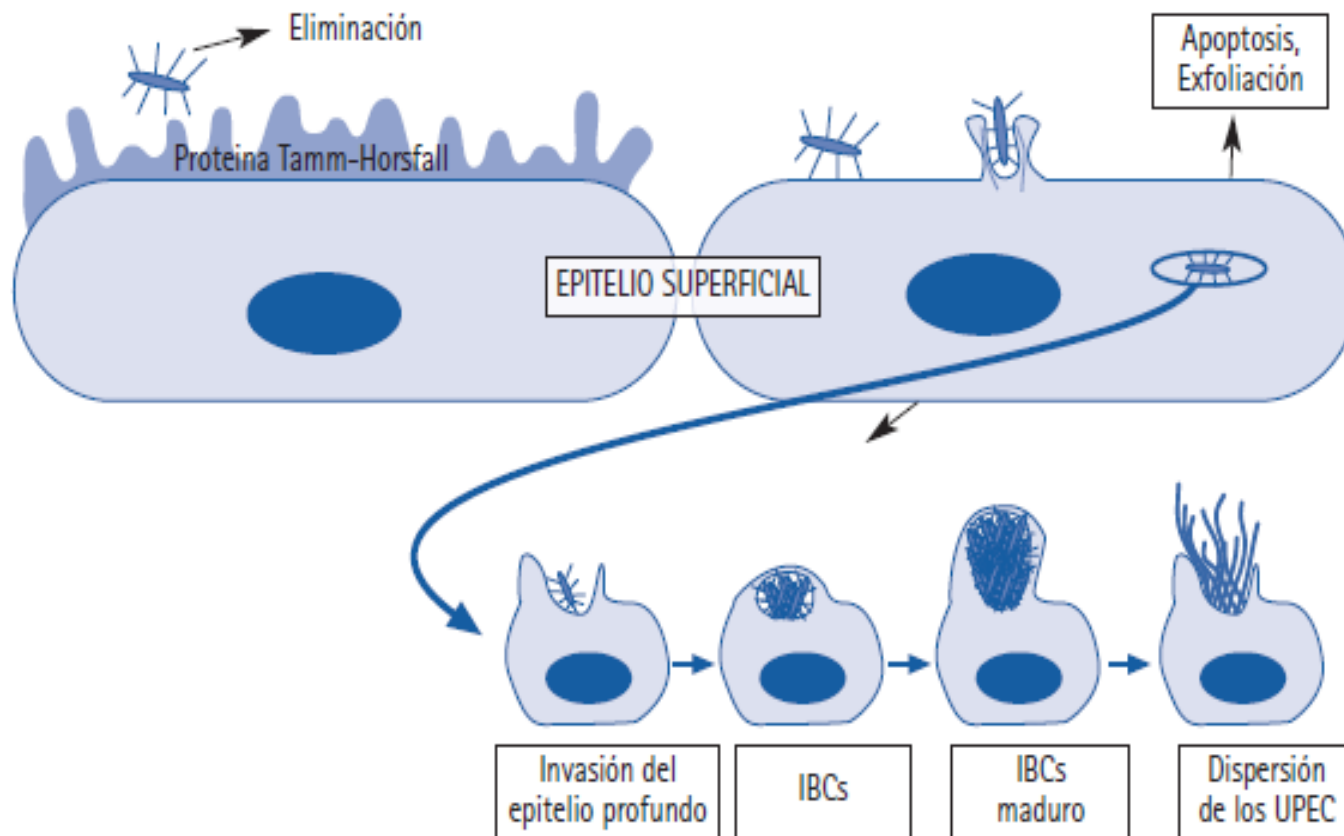
## Figura 2.

Principales factores de virulencia de los UPEC.



### Figura 3.

Efectos patógenos desencadenados por la fimbria tipo 1.





Review

## Urinary Tract Infections Caused by Uropathogenic *Escherichia coli*: Mechanisms of Infection and Treatment Options

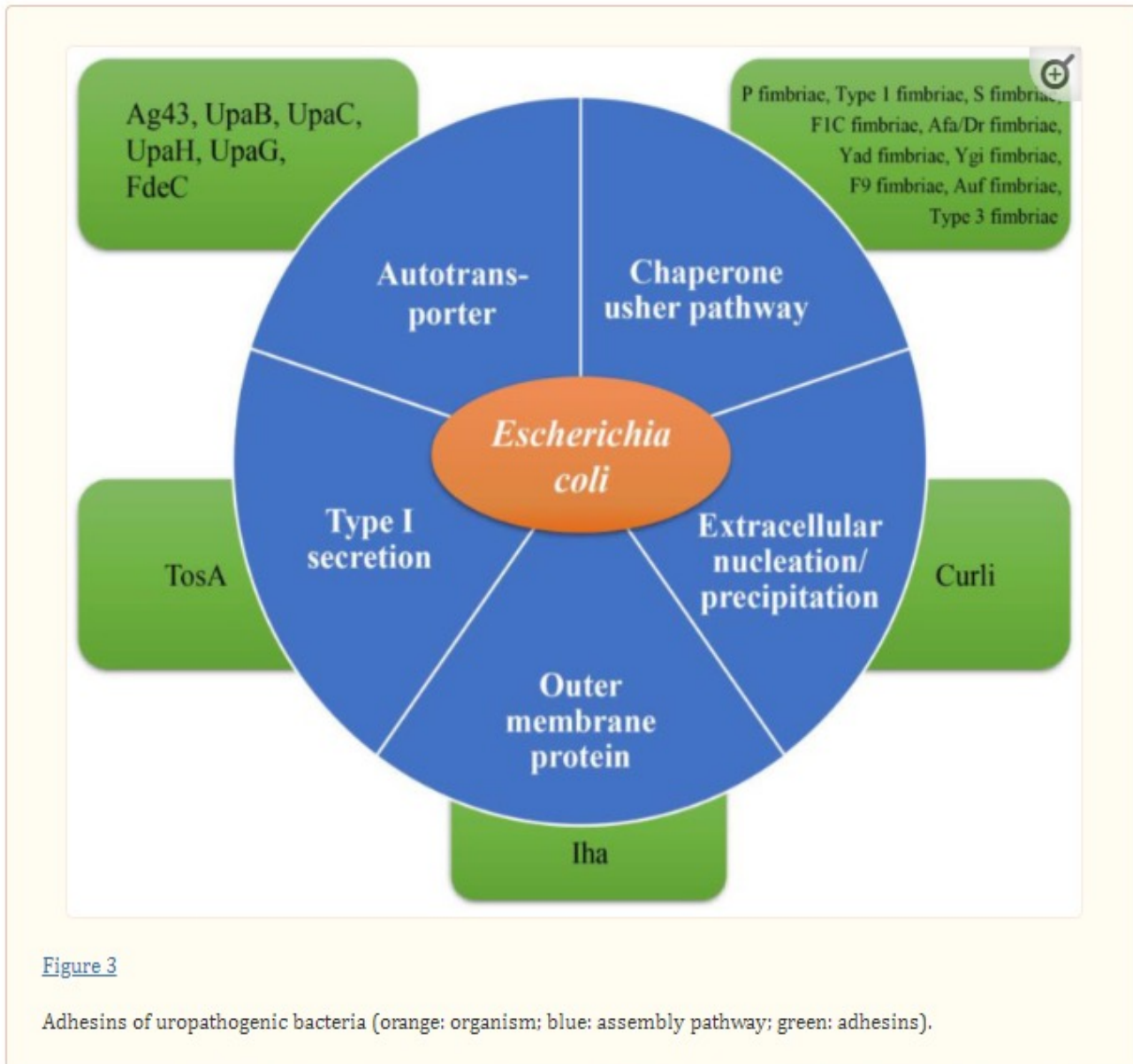
Yang Zhou <sup>1,2</sup>, Zuying Zhou <sup>1,2</sup>, Lin Zheng <sup>1,2</sup>, Zipeng Gong <sup>1</sup>, Yueting Li <sup>1</sup>, Yang Jin <sup>1</sup>, Yong Huang <sup>1,2,\*</sup> and Mingyan Chi <sup>1,2</sup>

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**Abstract:** Urinary tract infections (UTIs) are common bacterial infections that represent a severe public health problem. They are often caused by *Escherichia coli* (*E. coli*), *Klebsiella pneumoniae* (*K. pneumoniae*), *Proteus mirabilis* (*P. mirabilis*), *Enterococcus faecalis* (*E. faecalis*), and *Staphylococcus saprophyticus* (*S. saprophyticus*). Among these, uropathogenic *E. coli* (UPEC) are the most common causative agent in both uncomplicated and complicated UTIs. The adaptive evolution of UPEC has been observed in several ways, including changes in colonization, attachment, invasion, and intracellular replication to invade the urothelium and survive intracellularly. While antibiotic therapy has historically been very successful in controlling UTIs, high recurrence rates and increasing antimicrobial resistance among uropathogens threaten to greatly reduce the efficacy of these treatments.



# BACTERIURIA ASINTOMÁTICA

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El término bacteriuria asintomática (BA) hace referencia a la existencia de bacterias en el tracto urinario en un recuento significativo en una muestra de orina correctamente recogida, en una persona asintomática.





## Targeting Asymptomatic Bacteriuria in Antimicrobial Stewardship: the Role of the Microbiology Laboratory

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<sup>a</sup>Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA

<sup>b</sup>Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA

<sup>c</sup>Pathology & Laboratory Medicine and Division of Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia, USA

**TABLE 1** Microbiologic definition of asymptomatic<sup>a</sup> bacteriuria<sup>b</sup>

### Criteria for ASB diagnosis

- Two consecutive voided urine specimens (preferably within 2 wk) with the same bacterial species isolated in quantitative count of  $>10^5$  CFU/ml in women, including pregnant women (1, 2)
- A single voided urine specimen with one bacterial species isolated in a quantitative count of  $>10^5$  CFU/ml in men (1, 2)
- A single catheterized urine specimen with one or more bacterial species isolated in a quantitative count of  $>10^5$  CFU/ml in either women or men (1) or  $\geq 10^2$  CFU/ml of a single bacterial species from a single catheterized urine specimen (2)
- Any urine specimen with  $>10^4$  CFU/ml of group B *Streptococcus* is significant for ASB in a pregnant woman (3)

<sup>a</sup>No signs or symptoms referable to the urinary tract, e.g., typical urinary tract symptoms include urinary frequency, urinary urgency, lower abdominal pain, pelvic pain, and/or flank pain.

<sup>b</sup>Presence of more than one bacterial type indicates contamination with organisms normally found on the skin. The presence of yeast in the urine of asymptomatic patients is almost always the result of external genital tract colonization, and there are no consistent diagnostic criteria to define significant infection (7).

# ELEGIR SABIAMENTE EN BACTERIURIA ASINTOMATICA

**TABLE 3** Choosing wisely recommendations for asymptomatic bacteriuria

Society	Recommendation
Choosing Wisely United States <a href="http://www.choosingwisely.org/clinician-lists">http://www.choosingwisely.org/clinician-lists</a> American Academy of Pediatrics American Geriatrics Society (Feb 27, 2014)	Avoid the use of surveillance cultures for screening and treatment of ASB Do not use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present
The Society for Post-Acute and Long-Term Care Medicine (AMDA) (Mar 20, 2015) Infectious Diseases Society of American (IDSA) Society for Healthcare Epidemiology of America (SHEA)	Do not obtain a urine culture unless there are clear signs and symptoms that localize to the urinary tract Do not treat ASB with antibiotics Do not perform urinalysis, urine culture, blood culture, or <i>C. difficile</i> testing unless patients have signs or symptoms of infection; tests can be falsely positive, leading to overdiagnosis and overtreatment
American Urological Association (June 11, 2015)	Prescribing antimicrobials to patients using indwelling or intermittent catheterization of the bladder unless there are signs and symptoms of urinary tract infection
Choosing Wisely Canada ( <a href="https://choosingwiselycanada.org">https://choosingwiselycanada.org</a> ) Association of Medical Microbiology and Infectious Disease Canada (Feb 1, 2017)	Do not obtain a urine culture from adults who lack symptoms localizing to the urinary tract or fever, unless they are pregnant or undergoing genitourinary instrumentation where mucosal bleeding is expected
Canadian Association of Pathologists (Oct 29, 2014)	Do not obtain urine culture on asymptomatic patients, including elderly patients, patients with diabetes, or as a follow-up to confirm effective treatment
Canadian Geriatrics Society (Apr 2, 2014)	Do not use antimicrobials to treat bacteriuria in older adults unless specific urinary tract symptoms are present
Canadian Nurses Association (Jan 9, 2017)	Do not treat bacteriuria in older adults unless specific urinary tract symptoms are present
Canadian Nurses Association/Infection Prevention and Control Canada (Nov 2017)	Do not do urine dipstick or culture unless urinary tract symptoms are present

- J Clin Microbiol . 2020 Apr 23;58(5):e00518-18. doi: 10.1128/JCM.00518-18. Print 2020 Apr 23.



*Clinical Infectious Diseases*

**IDSA FEATURES**



# Clinical Practice Guideline for the Management of Asymptomatic Bacteriuria: 2019 Update by the Infectious Diseases Society of America<sup>a</sup>

**Lindsay E. Nicolle,<sup>1</sup> Kalpana Gupta,<sup>2</sup> Suzanne F. Bradley,<sup>3</sup> Richard Colgan,<sup>4</sup> Gregory P. DeMuri,<sup>5</sup> Dimitri Drekonja,<sup>6</sup> Linda O. Eckert,<sup>7</sup> Suzanne E. Geerlings,<sup>8</sup> Béla Köves,<sup>9</sup> Thomas M. Hooton,<sup>10</sup> Manisha Juthani-Mehta,<sup>11</sup> Shandra L. Knight,<sup>12</sup> Sanjay Saint,<sup>13</sup> Anthony J. Schaeffer,<sup>14</sup> Barbara Trautner,<sup>15</sup> Bjorn Wullt,<sup>16</sup> and Reed Siemieniuk<sup>17</sup>**

<sup>1</sup>Department of Internal Medicine, School of Medicine, Rady Faculty of Health Sciences, University of Manitoba, Winnipeg, Canada; <sup>2</sup>Division of Infectious Diseases, Veterans Affairs Boston Healthcare System and Boston University School of Medicine, West Roxbury, Massachusetts; <sup>3</sup>Division of Infectious Diseases, University of Michigan, Ann Arbor; <sup>4</sup>Department of Family and Community Medicine, University of Maryland, Baltimore; <sup>5</sup>Division of Pediatric Infectious Diseases, Department of Pediatrics, University of Wisconsin School of Medicine and Public Health, Madison; <sup>6</sup>Division of Infectious Diseases, University of Minnesota, Minneapolis; <sup>7</sup>Department of Obstetrics and Gynecology and Department of Global Health, University of Washington, Seattle; <sup>8</sup>Department of Internal Medicine, Amsterdam University Medical Center, The Netherlands; <sup>9</sup>Department of Urology, South Pest Teaching Hospital, Budapest, Hungary; <sup>10</sup>Division of Infectious Diseases, University of Miami, Florida; <sup>11</sup>Division of Infectious Diseases, Yale School of Medicine, New Haven, Connecticut; <sup>12</sup>Library and Knowledge Services, National Jewish Health, Denver, Colorado; <sup>13</sup>Department of Internal Medicine, Veterans Affairs Ann Arbor and University of Michigan, Ann Arbor; <sup>14</sup>Department of Urology, Northwestern University, Chicago, Illinois; <sup>15</sup>Section of Health Services Research, Department of Medicine, Baylor College of Medicine, Houston, Texas; <sup>16</sup>Division of Microbiology, Immunology and Glycobiology, Lund, Sweden; and <sup>17</sup>Department of Health Research Methods, Evidence, and Impact, McMaster University, Hamilton, Ontario, Canada

Downloaded from

**Table 1. Prevalence of Asymptomatic Bacteriuria Reported for Different Populations**

Population	Prevalence, %	Reference
<b>Children</b>		
Boys	<1	[7]
Girls	1–2	[8–10]
<b>Healthy women</b>		
Premenopausal	1.0–5.0	[11]
Pregnant	1.9–9.5	[11]
Postmenopausal (age 50–70 y)	2.8–8.6	[11]
<b>Persons with diabetes</b>		
Women	10.8–16	[12]
Men	0.7–11	[12]
<b>Elderly persons in the community (age ≥70 y)</b>		
Women	10.8–16	[13]
Men	3.6–19	[13]
<b>Elderly persons in a long-term care facility</b>		
Women	25–50	[13]
Men	15–50	[13]
<b>Persons with spinal cord injury</b>		
Intermittent catheter use	23–69	[14]
Sphincterotomy/condom catheter	57	[15]
<b>Persons with kidney transplant</b>		
First month posttransplant	23–24	[16, 17]
1 mo–1 y post-transplant	10–17	[16]
>1 y post-transplant	2–9	[16]
<b>Persons with indwelling catheter use</b>		
Short-term	3%–5%/day catheter	[18]
Long-term	100	[19]

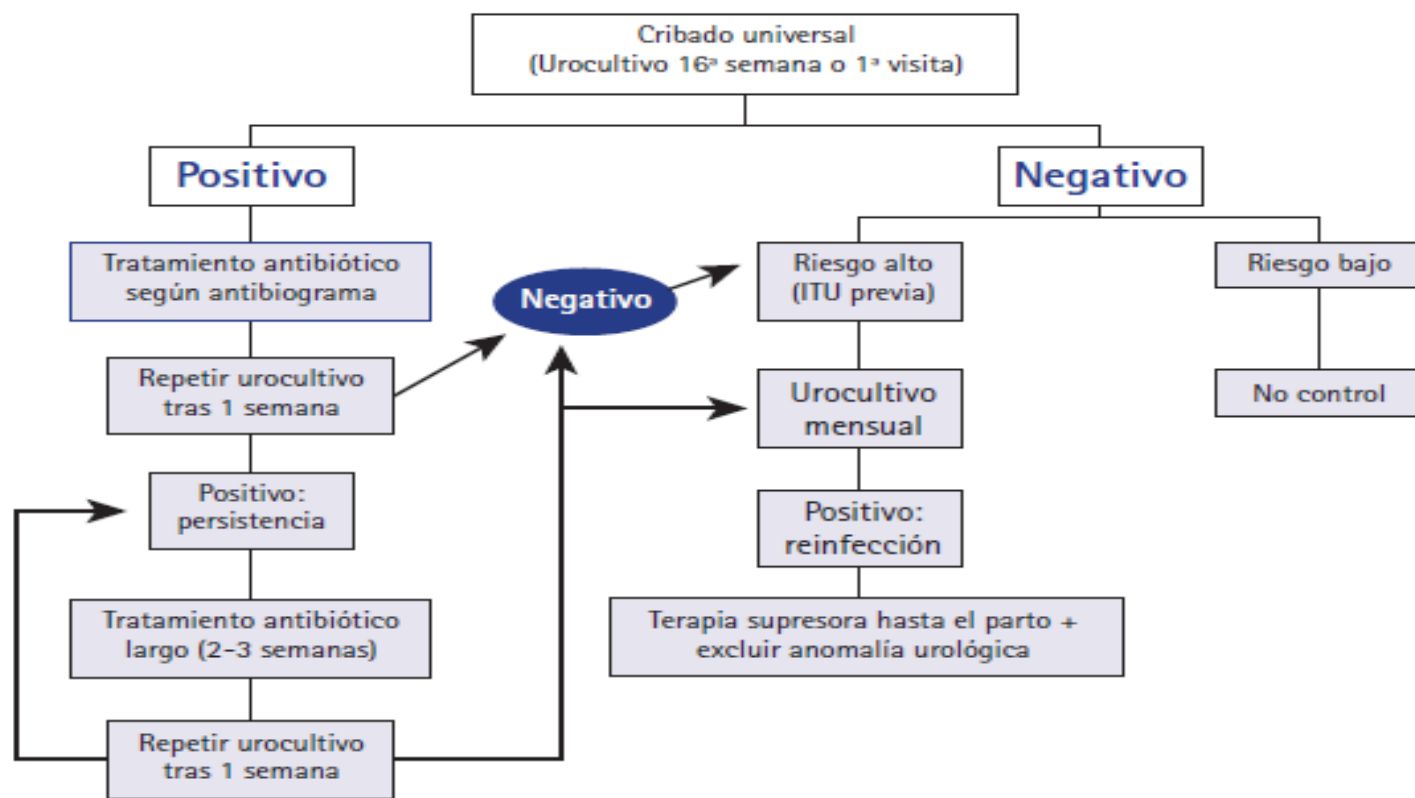
¿Se debe testear y tratar la ASB en mujeres embarazadas?

1: In pregnant women, we recommend screening for and treating ASB (strong recommendation, moderate-quality evidence).

2: In pregnant women with ASB, we suggest 4–7 days of antimicrobial treatment rather than a shorter duration (weak recommendation, low-quality evidence).

**Figura 1.**

Manejo de la BA en el embarazo. Adaptado de Herraiz Ma, et al. *Enf Infecc Med Clin*. 2005;23(Supl.4):40-6.





## The Brazilian Journal of INFECTIOUS DISEASES

[www.elsevier.com/locate/bjid](http://www.elsevier.com/locate/bjid)



### Original article

## **Joint report of SBI (Brazilian Society of Infectious Diseases), FEBRASGO (Brazilian Federation of Gynecology and Obstetrics Associations), SBU (Brazilian Society of Urology) and SBPC/ML (Brazilian Society of Clinical Pathology/Laboratory Medicine): recommendations for the clinical management of lower urinary tract infections in pregnant and non-pregnant women**



Patricia de Rossi  <sup>a,\*</sup>, Sergio Cimerman  <sup>b</sup>, José Carlos Truzzi  <sup>c</sup>,  
Clóvis Arns da Cunha  <sup>d</sup>, Rosiane Mattar  <sup>e</sup>, Marinês Dalla Valle Martino  <sup>f</sup>,  
Maurício Hachul  <sup>g</sup>, Adagmar Andriolo  <sup>h</sup>, José Ananias Vasconcelos Neto  <sup>i</sup>,

braz j infect dis 2020;24(2):110–119

# RECOMENDACIONES ASB EN EMBARAZADAS



All pregnant women with ASB should be treated with antibiotics.



The choice of antimicrobial should be based on the antibiotic sensitivity profile and its safety during pregnancy (FDA pregnancy risk category).



Therapy duration is five days for nitrofurantoin, seven days for beta-lactams, or a single dose of Fosfomicin trometamol.

**Table 1 – Recommended antibiotics for treatment of ASB in pregnancy.**

Drug	Dose	Duration	Comments
Fosfomycin trometamol	3 g	Single dose	
Nitrofurantoin	100 mg q6h <sup>a</sup>	5 days	Do not use after 37 weeks of pregnancy
Cephalexin	500 mg q6h <sup>a</sup>	7 days	Other cephalosporins may be used at usual doses
Cefuroxime	250 mg q12h <sup>a</sup>	7 days	
Amoxicillin	500 mg q8h <sup>a</sup> or 875 mg q12h <sup>a</sup>	7 days	Treatment of choice for Group B <i>Streptococcus</i> (GBS, <i>Streptococcus agalactiae</i> ) and <i>Enterococcus faecalis</i>

<sup>a</sup> aq6h: every 6 h; q8h: every 8 h; q12h: every 12 h.

**Table 2 – Recommended regimens for UTI antimicrobial prophylaxis in pregnancy.<sup>a</sup>**

Drug	Dose	Comments
Nitrofurantoin	100 mg	Do not use after 37 weeks of pregnancy
Cephalexin	250–500 mg	

<sup>a</sup> Continuous or postcoital regimen

# ¿Se debe examinar y tratar la ASB en personas mayores con discapacidad funcional? Mujeres u Hombres Residentes en la Comunidad, o en Residencias de Largo Plazo u hogares geriátricos?

## Recomendaciones

1. En personas mayores que viven en la comunidad y que son funcionalmente deterioradas, no recomendamos la detección o el tratamiento ASB. (recomendación fuerte, evidencia de baja calidad).

2. En personas mayores residentes en centros de larga estancia, recomendamos en contra de la detección o el tratamiento de la ASB. (recomendación fuerte evidencia de calidad moderada).





**En un paciente mayor, funcional o cognitivamente deteriorado ¿Los síntomas localizados no distinguen la ASB de la ITU sintomática?**

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**CAMBIO DEL ESTADO  
MENTAL , CONFUSION ,  
DELIRIUM**

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**FIEBRE**

**INESTABILIDAD  
HEMODINAMICA**

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cid 2019:68 (15 May) • Nicolle et al

# ¿Deberían realizarse urocultivo a los pacientes que han recibido un trasplante de riñón? O se debe tratar por ASB?

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- En receptores de trasplante renal que han tenido una cirugía de trasplante renal cirugía > 1 mes o antes, recomendamos no realizar pruebas de tamizaje para o tratar ASB



## REVIEW



### Asymptomatic bacteriuria and urinary tract infections in kidney transplant recipients

Julien Coussemant<sup>a</sup>, Hannah Kaminski<sup>b</sup>, Anne Scemla<sup>c</sup>, and Oriol Manuel<sup>d</sup>

#### Purpose of review

Urinary tract infection (UTI) is the most common infection in kidney transplant recipients (KTRs). Several elements increase the risk of UTI and/or modify its clinical presentation among KTRs (e.g. immunosuppressive therapy, kidney allograft denervation, and use of urinary catheters). Also, KTRs may have UTIs because of difficult-to-identify and/or difficult-to-treat organisms. We provide an overview of the current knowledge regarding bacterial UTIs in KTRs, with a focus on recent findings.

Recent findings

## Antimicrobial agents: bacterial/fungal

### KEY POINTS

- There is accumulating evidence that screening for and treating ASB is not beneficial among KTRs who are at least 1–2 months after transplantation and do not have a urinary catheter.
- There are insufficient data to recommend or discourage the use of a screen-and-treat strategy for ASB in the first 1–2 months after kidney transplantation.
- Randomized controlled trials are needed to guide the choice and duration of antibiotic therapy in KTRs with acute pyelonephritis.
- Innovative nonantibiotic-based approaches are needed to improve the prevention of symptomatic UTIs, which remain prevalent and detrimental after kidney transplantation.

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**¿Deberían los pacientes sometidos a procedimientos endourológicos deben ser testeados? o ¿Tratado por ASB?**

TESTEAR Y TRATAR  
PREVIO AL  
PROCEDIMIENTO

TERAPIA  
ANTIMICROBIANA  
DIRIGIDA

PAUTAS DE  
TRATAMIENTO  
CORTA (1-2 DOSIS )

## Infectious and inflammatory disease in urology

**Table 1.** Recommendations of the European Association of Urology guidelines [5<sup>\*</sup>] for the management of ABU

	Screen	Treat	Notes
Healthy patients	⊖	⊖	
Pregnant women	☺	☺	Please consult national guidelines
Postmenopausal women	⊕	⊕	
Women with recurrent uncomplicated UTI	⊕	⊕	The treatment of ABU may be potentially harmful
Diabetes	⊕	⊕	
Elderly institutionalized patients	⊕	⊕	
Patients with renal transplants	⊕	⊕	
Prior to surgery	☺	☺	Only in case of urological procedures entering urinary tract and breaching the mucosa
Patients with indwelling catheters	⊕	⊕	

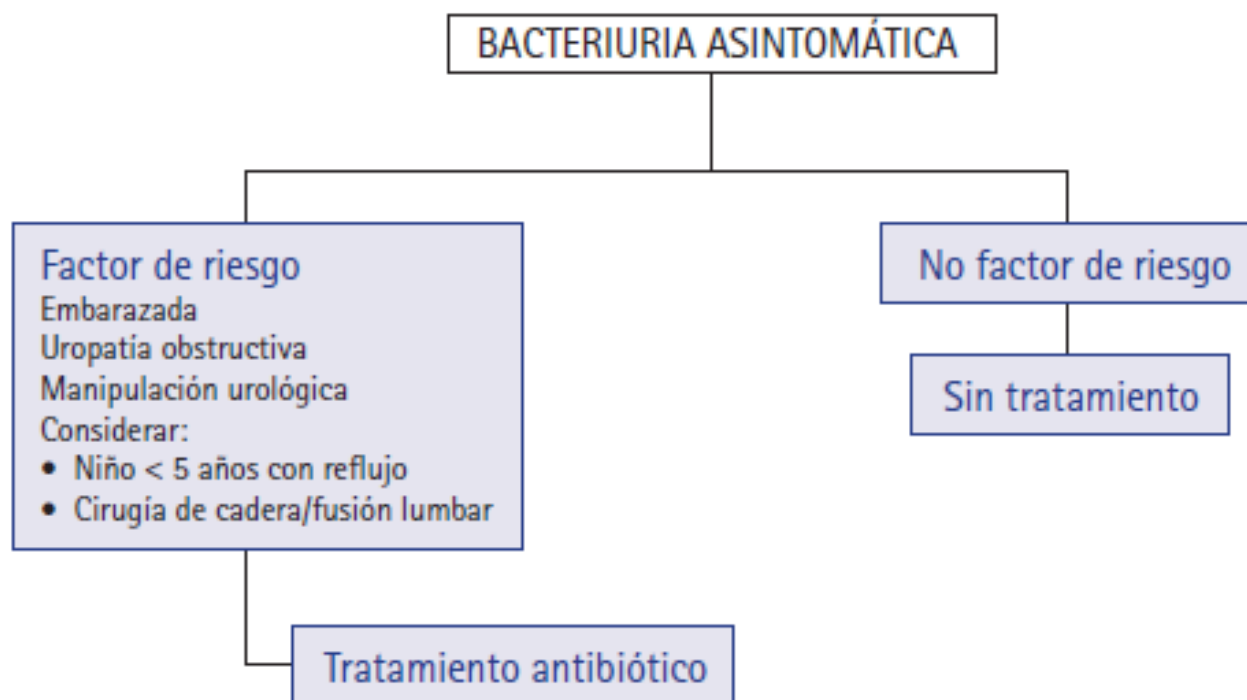
The table shows the recommendation from the European Association of Urology guidelines in the management of patients with ABU. ABU, asymptomatic bacteriuria; UTI, urinary tract infection.

☺ = recommended.

⊕ = not recommended.

## Figura 2.

Manejo de la BA (adaptado de Pigrau C, et al. *Enf Infec Med Clin*. 2005;23(Supl.4):28-39).



## **TABLA II.**

Factores de riesgo para infección por *E. coli* productor de BLEE

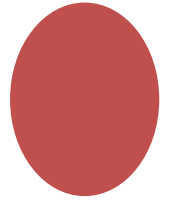
### *Infección comunitaria*

- Mayor edad
- Diabetes mellitus
- Infecciones urinarias de repetición
- Sonda urinaria
- Viaje reciente a zonas de alta prevalencia
- Uso reciente de aminopenicilinas, cefalosporinas o quinolonas

### *Infección nosocomial*

- Mayor duración del ingreso
- Sonda urinaria
- Uso reciente de quinolonas y cefalosporinas

# PROFILAXIS NO ANTIMICROBIANA



ESTROGENOS VAGINALES

CRAMBERRY

INMUNOPROFILAXIS





**Table 2.** Reports describing vaccines against *E. coli*, especially UPEC.

Type of Vaccine	Component of Vaccine	Comments	References	
Whole-cell vaccines	Inactivated vaccines	<ul style="list-style-type: none"> <li>Solco-Urovac: 10 strains of heat-inactivated uropathogens (6 from <i>E. coli</i> of different serotypes and 1 each from <i>K. pneumoniae</i>, <i>P. mirabilis</i>, <i>M. morgani</i>, and <i>E. faecalis</i>).</li> </ul>	<ul style="list-style-type: none"> <li>Causes the prophylaxis of recurrent UTIs and major side effects, such as fever, bleeding, burning, nausea, and vaginal itching.</li> </ul>	[179,192,193]
		<ul style="list-style-type: none"> <li>StroVac: the same 10 strains in a different formulation.</li> </ul>	<ul style="list-style-type: none"> <li>Causes the prophylaxis of recurrent UTIs.</li> </ul>	[181]
		<ul style="list-style-type: none"> <li>Uro-vaxom: 18 UPEC strains.</li> </ul>	<ul style="list-style-type: none"> <li>Prevents recurrent UTIs in women.</li> </ul>	[182-184]
		<ul style="list-style-type: none"> <li>Urvakol: a mixture of inactivated bacterial pathogens including <i>E. coli</i>, <i>P. mirabilis</i>, <i>E. faecalis</i>, <i>K. pneumoniae</i>, and <i>P. aeruginosa</i>.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes immunogenicity in animals and humans.</li> </ul>	[186,187]
		<ul style="list-style-type: none"> <li>Urostim: a mixture of inactivated bacterial pathogens including <i>E. coli</i>, <i>P. mirabilis</i>, <i>E. faecalis</i>, and <i>K. pneumoniae</i>.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes immunogenicity in animals and humans.</li> </ul>	[186,187]
		<ul style="list-style-type: none"> <li>ExPEC9V (NCT04899336).</li> </ul>	<ul style="list-style-type: none"> <li>Targets invasive extraintestinal pathogenic <i>Escherichia coli</i> disease (IED).</li> </ul>	[188]
		<ul style="list-style-type: none"> <li>Intranasal vaccination with formalin-inactivated CP923.</li> </ul>	<ul style="list-style-type: none"> <li>Shows stronger systemic antibody response.</li> </ul>	[194]
Attenuated vaccines	<ul style="list-style-type: none"> <li>NU14 <i>ΔuvrA</i>: a mutation of O antigens of UPEC strains.</li> </ul>	<ul style="list-style-type: none"> <li>Protects against NU14, CFT073, and four UPEC isolates.</li> </ul>	[195]	
Capsular- or LPS-based vaccines	<ul style="list-style-type: none"> <li>ExPEC4V (NCT03500679): O antigens specific to serogroups O1A, O2, O6A, and O25B.</li> </ul>	<ul style="list-style-type: none"> <li>Prevents UTIs even with high bacterial doses and low bacteremia.</li> </ul>	[196,197]	
Antigen-specific vaccines	Fimbrial and non-fimbrial adhesin vaccines	<ul style="list-style-type: none"> <li>FimCH vaccine with Freund's adjuvants; FimH vaccine with Alum and MF59 adjuvants.</li> </ul>	<ul style="list-style-type: none"> <li>Promotes an immune response against UPEC and prevents colonization in murine and primate models; ineffective in humans.</li> </ul>	[198-200]
		<ul style="list-style-type: none"> <li>TLR ligand-based vaccine with the fusion of FimH adhesin; vaccination with admixed FimH, FliC, and Montanide ISA 206 adjuvants.</li> </ul>	<ul style="list-style-type: none"> <li>Induces an immune response and protects mice against UTIs.</li> </ul>	[198,201,202]
		<ul style="list-style-type: none"> <li>PapDG vaccines with Freund's adjuvants.</li> </ul>	<ul style="list-style-type: none"> <li>Generates immune responses and reduces UPEC colonization in a mouse model.</li> </ul>	[20]
Iron-scavenger-receptor-based vaccines	<ul style="list-style-type: none"> <li>Salmochelins receptor <i>IroN</i> or <i>IroN</i> with Freund's adjuvant; aerobactin receptor <i>IutA</i> conjugated with cholera toxin; yersiniabactin receptor <i>FyuA</i> with alum as an adjuvant.</li> </ul>	<ul style="list-style-type: none"> <li>Generates strong immune responses and protection against UPEC infection in murine models.</li> </ul>	[121,203]	
Toxin-based vaccines	<ul style="list-style-type: none"> <li>Vaccine containing antigens such as hemolysin <i>HlyA</i>, recombinant hemolysin, mutated <i>CNF1</i>, and <i>HlyA</i> toxins.</li> </ul>	<ul style="list-style-type: none"> <li>Reduces UTI symptoms in murine experimental infection models.</li> </ul>		



# Modificaciones conductuales para la prevención de ITUr



Limpiarse de adelante hacia atrás después de defecar



Micción poscoital



Ingesta liberal de líquidos



Evite las duchas vaginales



No use ropa interior ajustada

# CASO CLINICO

PACIENTE M DE 69 A SONDADO  
CRONICO HACE 1 AÑO  
ANTECEDENTE DE HPB EN  
MANEJO CON TAMSULOSINA.  
CLINICAMENTE ASINTOMATICO ,  
NO FIEBRE , NO EQUIVALENTES  
FEBRILES.

SE SOMETERA A CISTOSCOPIA  
TRANSURETRAL

A INICIARIAS MANEJO  
ANTIBIOTICO?

1. SI
2. NO



# PROFILAXIS ANTIBIOTICA PREVIA Y POSTERIOR AL PROCEDIMIENTO UROLOGICO

against screening for or treating ASB (*strong recommendation, low-quality evidence*). **Remarks:** Clinical signs and symptoms of UTI experienced by patients with SCI may differ from the classic genitourinary symptoms experienced by patients with normal sensation. The atypical presentation of UTI in these patients should be considered in making decisions with respect to treatment or nontreatment of bacteriuria.

## XI. Should Patients With an Indwelling Urethral Catheter Be Screened or Treated for ASB?

### Recommendations

1. In patients with a short-term indwelling urethral catheter (<30 days), we recommend against screening for or treating ASB (*strong recommendation, low-quality evidence*). **Remarks:** Considerations are likely to be similar for patients with indwelling suprapubic catheters, and it is reasonable to manage these patients similar to patients with indwelling urethral catheters, for both short-term and long-term suprapubic catheterization.
2. In patients with indwelling catheters, we make no recommendation for or against screening for and treating ASB at the time of catheter removal (knowledge gap). **Remarks:** Antimicrobial prophylaxis given at the time of catheter removal may confer a benefit for prevention of symptomatic UTI for some patients. The evidence to support this observation is largely from studies enrolling surgical patients who receive prophylactic antimicrobials at the time of short-term catheter removal, generally without screening to determine if ASB is present. It is unclear whether or not the benefit is

riuria. **Remarks:** In individuals with bacteriuria, these are procedures in a heavily contaminated surgical field. High-quality evidence from other surgical procedures shows that perioperative antimicrobial treatment or prophylaxis for contaminated or clean-contaminated procedures confers important benefits.

2. In patients who will undergo endoscopic urologic procedures, we suggest that a urine culture be obtained prior to the procedure and targeted antimicrobial therapy prescribed rather than empiric therapy (*weak recommendation, very low-quality evidence*).
3. In patients with ASB who will undergo a urologic procedure, we suggest a short course (1 or 2 doses) rather than more prolonged antimicrobial therapy (*weak recommendation, low-quality evidence*). **Remarks:** Antimicrobial therapy should be initiated 30–60 minutes before the procedure.

## XIV. Should Patients Undergoing Implantation of Urologic Devices or Living With Urologic Devices Be Screened for or Treated for ASB?

### Recommendations

1. In patients planning to undergo surgery for an artificial urine sphincter or penile prosthesis implantation, we suggest not screening for or treating ASB (*weak recommendation, very low-quality evidence*). **Remarks:** All patients should receive standard perioperative antimicrobial prophylaxis prior to device implantation.
2. In patients living with implanted urologic devices, we suggest not screening for or treating ASB (*weak recommendation, very low-quality evidence*).

# SE INDICO LA SIGUIENTE PROFILAXIS A NUESTRO PACIENTE:

Fosfomicina sobre por tres gramos (3Gr) disolver un sobre en un vaso completo de agua consumir con vejiga urinaria vacía (después de la micción) hacerlo tres (3) horas antes del procedimiento quirúrgico urológico y repetir 24 horas después del mismo.





**UROVITAL**

**PACIENTE: JOSE DIAZ NEGRETE**  
**CC: 1140861004**

**FECHA: 15 MARZO / 2023**

**CISTOSCOPIA TRANSURETRAL**

**SE REALIZA PROCEDIMIENTO CISTOSCOPIA Y DILATACION URETRAL, PREVIA ASEPSIA Y COLOCACION DE CAMPO ESTERIL, SE COLOCA XILOCAINA JALEA AL 2%,**

**POSICION: LITOTOMIA**

**EQUIPO: OLYMPUS 17 FR**

**MEATO URETRAL: PERMEABLE SIN ESTENOSIS**

**URETRA ANTERIOR: MUCOSA SANA, SIN ESTENOSIS**

**URETRA BULBAR: SIN ESTENOSIS**  
**DVC: 3 CMTS**

**PROSTATA: AUMENTADA DE TAMAÑO, LOBULOS LATERALES CONTACTAN EN LINEA MEDIA, CUELLO VESICAL ALTO, OBSTRUCTIVA**

**VEJIGA: TRABECULACION GRADO III MULTIPLES DIVERTICULOS, MUCOSA SANA**  
**MEATOS URETERALES GRADO I, EYACULAN ORINA CLARA**  
**CAPACIDAD VESICAL NORMAL**  
**NO LESIONES, NO TUMORES.**

**DIAGNOSTICO: HPB GRADO II + DIVERTICULOS VESICALES**

# CONCLUSIONES



IDENTIFICAR  
CLINICAMENTE EL  
DIAGNOSTICO DE  
INFECCION URINARIA



IDENTIFICAR FACTORES DE  
RIESGO



MODIFICAR FACTORES DE  
RIESGO



TRATAMIENTOS  
ANTIBIOTICOS GUIADOS  
POR UROCULTIVOS



PAUTAS CORTAS DE  
TRATAMIENTO  
ANTIBIOTICO



EDUCACION AL PACIENTE

# RESISTENCIA BACTERIANA





GRACIAS

**XVI** Congreso Colombiano de  
Enfermedades Infecciosas  
**CCEI 2023**

**Nuevos retos y  
grandes avances**

Estelar Santamar Hotel y Centro de Convenciones  
**Santa Marta**

**20 al 23  
de septiembre  
2023**

**ACIN**  
ASOCIACION COLOMBIANA  
DE NEFROLOGIA