CHU
Hôpitaux de Rouen

Université de Rouen

BEST OF 2008
INFECTIOLOGIE URINAIRE
9-2007 / 9-2008

François CARON

Infectiologie

CHU de Rouen

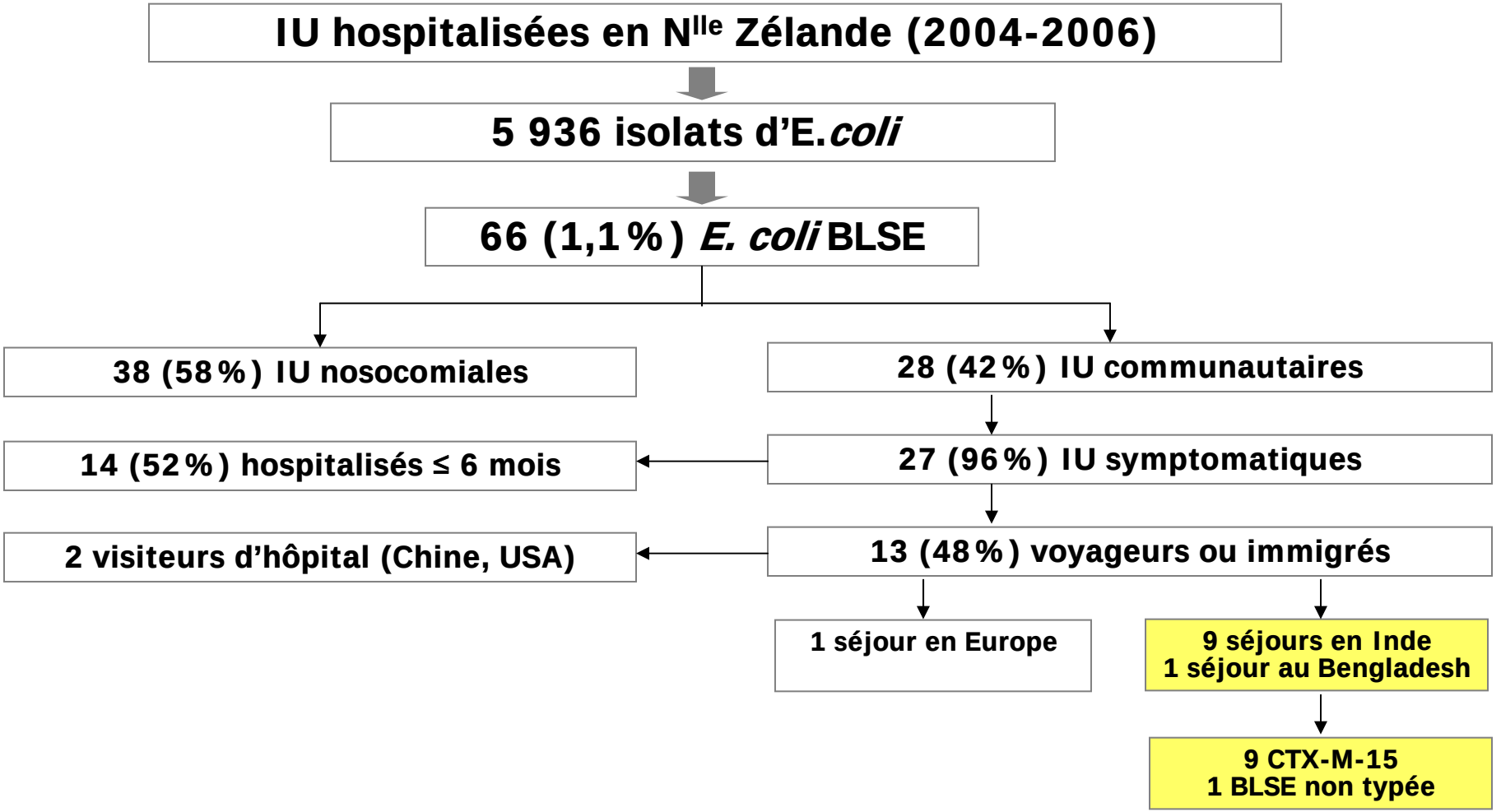
Recommandations de Bonnes Pratiques

- IU de l’enfant - AFSSAPS 2007
  Med Mal Infect 2007;37:645-663
  www.afssaps.fr

- IU de l’adulte - AFSSAPS 2008
  Med Mal Infect 2008; sous presse
  www.afssaps.fr

Epidémiologie

Community-onset genitourinary tract infection due to CTX-M-15-producing *Escherichia coli* among travelers to the Indian subcontinent in New Zealand.



Clin Infect Dis. 2008 Sep 1;47(5):689-92

Freeman JT, McBride SJ, Heffernan H, Bathgate T, Pope C, Ellis-Pegler RB, Auckland, Nelle ZELANDE

Community-onset genitourinary tract infection due to CTX-M-15-producing *Escherichia coli* among travelers to the Indian subcontinent in New Zealand.

BLSE-CTX-M-15

- 1ère description en Inde en 2000
- Taux élevé de portage de BLSE (7%) dans une population indienne
- Hypothèses :
  - faible hygiène hydrique
  - usage antibiotique vétérinaire
  - usage antibiotique humain « over the counter »

Clin Infect Dis. 2008 Sep 1;47(5):689-92
Freeman et al. - Auckland, N^elle ZELANDE

Clinique :

IU chez le greffé rénal

IU masculines

Urinary tract infection due to *Corynebacterium urealyticum* in kidney transplant recipients : an underdiagnosed etiology for obstructive uropathy and graft dysfunction - Results of a prospective cohort study

163 greffés rénaux recrutés en 13 mois

J1 : ECBU + écouvillonnage inguinal
milieux sélectifs – cultures prolongées

Suivi des 25 patients à culture ⊕ : urines (n=16) ou peau (n=22)

M1 à M6 : clinique, ECBU, + / - traitement

Clin Infect Dis., 2008.46:825-30

F López-Medrano, M Garcıa-Bravo, JM Morales, A Andrés, R San Juan, M Lizasoain, and JM Aguado – Madrid, ESPAGNE

Colonisation / Infections urinaires à *C. urealyticum* chez 163 greffés rénaux

16 ECBU⊕ C. *urealyticum* (=D2)

10 IU symptomatiques :
- **9 à J0 ; 1 à M1**
- **9 cystites ; 1 pyélite / lithiase**

10 traitements :
- **8 teico (100-400 mg/j im 14j)**
- **2 vanco (20-40 mg/kg/j iv 14j)**

3 rechutes (≤ 3 mois)

6 asymptomatiques

2 traitements (teico SAI)

Clin Infect Dis., 2008.46:825-30

F. López-Medrano F. et al. – Madrid, ESPAGNE

Colonisation / infections urinaires à *C. urealyticum* chez des greffés rénaux

- **Fréquence :**
  - **9 % (3 % au seuil > 10^5 ufc / ml)**
  - **versus 0,1 – 0,3 % dans la population générale**
    → greffés rénaux = population à haut risque
    screening systématique « probablement non indiqué »
- **Facteurs de risque :**
  - **colonisation cutanée à *C. urealyticum* (OR : 208)**
    → mais incidence trop faible pour un screening systématique
  - **néphrostomie (OR : 52) et autres manipulations**
    → cause ou conséquence ?
- **Évolution :**
  - **symptôme urinaire prolongé (OR : 28)**
  - **uropathie obstructive (OR : 26)**

Clin Infect Dis., 2008.46:825-30

F. López-Medrano F. et al. – Madrid, ESPAGNE

IU à *C. urealyticum* : signes d'appel

- **IU chronique à ECBU conventionnel négatif**
- **Hématurie / pyurie inexpliquées**
- **Urines alcalines (pH > 7)**
- **Lithiase (struvite), uropathie obstructive, cystite ou pyélite encrustrée**

➡ alerter le laboratoire

Clin Infect Dis., 2008.46:825-30

F. López-Medrano F. et al. – Madrid, ESPAGNE

Acute bacterial prostatitis: heterogeneity in diagnostic criteria and management. Retrospective multicentric analysis of 371 patients diagnosed with acute prostatitis

CHU de Rouen et Dijon (1998-2003)

Urologie, Infectiologie, Médecine interne, Gériatrie

2 170 hommes admis pour IU

586 (27 %) diagnostic final de prostatite

371 (63 %) patients au dossier évaluable pour une étude rétrospective

BMC Infectious Diseases 2008, 8:12 doi:10.1186/1471-2334-8-12

M Etienne, P Chavanet, L Sibert, F Michel, H Levesque, B Lorcerie, J Doucet, P Pfitzenmeyer and F Caron, Rouen – FRANCE

Mode of contamination, medical history and symptoms of 371 patients with acute prostatitis

	Total patients	Department of admission			
		Urology	Infectious Diseases	Internal Medicine	Geriatrics
	n = 371	N = 178	n = 115	n = 48	n = 30
Mode of contamination					
Community-acquired	293 (79%)	140 (79%)	91 (79%)	41 (86%)	21 (71%)
Nosocomial	78 (21%)	37 (21%)	24 (21%)	7 (14%)	9 (29%)
Hospital acquisition	58 (75%)	26 (69%)	18 (75%)	5 (72%)	8 (87%)
Outpatient with urinary catheter	20 (25%)	11(31%)	6 (25%)	2 (28%)	1 (13%)
Medical history					
Medium Age (years)	61	57	60	66	84
Co-morbidities ≥ 2	26 (7%)	3 (2%)	2 (2%)	15 (31%)	7 (22%)
Clinical symptoms					
Fever	297 (80%)	154 (84%)	86 (80%)	38 (78%)	19 (63%)
Chills	135 (35%)	47 (25%)	60 (56%)	14 (28%)	7 (23%)
Urinary symptoms	266 (72%)	158 (86%)	65 (60%)	28 (57%)	15 (50%)
Cognitive disorders	14 (4%)	0 (0%)	5 (4%)	4 (8%)	10 (33%)
Miscellaneous symptoms	28 (8%)	0 (0%)	2 (2%)	21 (44%)	7 (23%)

BMC Infectious Diseases 2008, 8:12 doi:10.1186/1471-2334-8-12

Bacteriological results of urine cultures versus mode of contamination in a series of 371 acute prostatitis (AP)

		Total patients	Community-acquired AP	Nosocomial AP	Community-acquired *versus* nosocomial AP
		n = 371	n = 295	n = 76	***p*** **value**
Urine culture		347 (94%)	271 (92%)	76 (100%)	0.02
Sterile		122 (35%)	96 (35%)	29 (38%)	0.71
Positive		225 (65%)	178 (66%)	47 (62%)	0.71
	One strain	196 (87%)	159 (89%)	37 (79%)	0.09
	≥ 2 strains	29 (13%)	19 (11%)	10 (21%)	0.09
Isolated strains		270	213 (72%)	57 (75%)	ns
E. coli					
	All types	157 (58%)	142 (68%)	15 (26%)	< 0.01
	Ampicillin-S	95 (61%)	88 (62%)	7 (50%)	0.4
	Nalidixic acid-S	119 (76%)	110 (78%)	9 (57%)	0.2
	Ofloxacin-S	130 (83%)	120 (85%)	10 (64%)	0.2
	Cotrimoxazole-S	122 (78%)	115 (81%)	7 (43%)	< 0.01
Proteus		16 (6%)	11 (5%)	5 (9%)	0.5
KES group		24 (9%)	18 (8%)	6 (11%)	0.8
Enterococcus		16 (6%)	8 (4%)	8 (14%)	0.02
P. aeruginosa		20 (7%)	8 (4%)	12 (21%)	< 0.01
S. aureus		8 (3%)	3 (1%)	5 (9%)	0.02
Others		29 (11%)	23 (11%)	6 (11%)	0.9

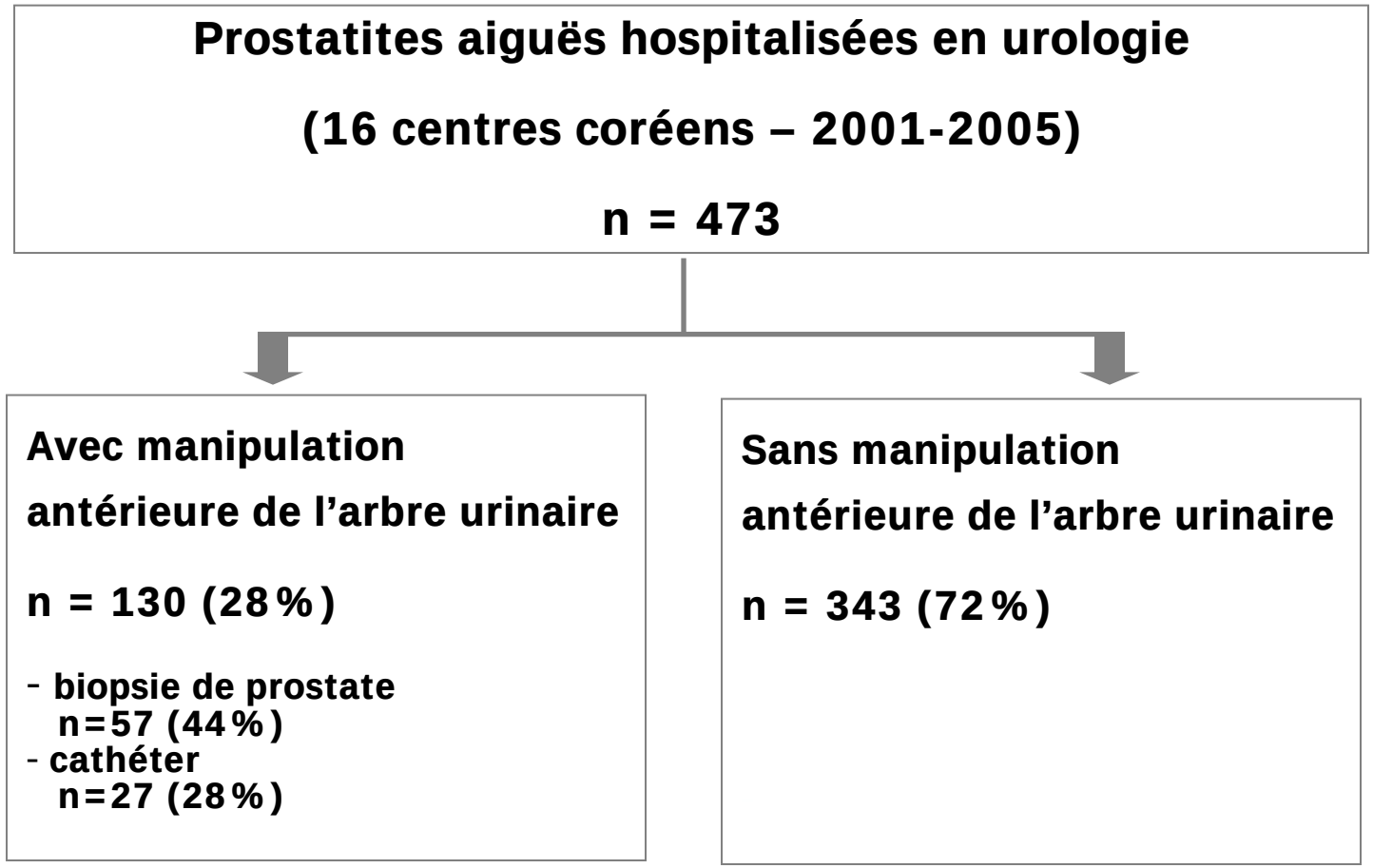
BMC Infectious Diseases 2008, 8:12 doi:10.1186/1471-2334-8-12

Antibiotic treatment and rates of failure for 371 acute prostatitis (AP)

	371 AP patients							
	Total patients n = 371	**Community acquired AP** n = 293	**Nosocomial AP** n = 78	Community acquired Versus nosocomial AP p value	**Urology** n = 178	**Infectious Diseases** n = 115	**Internal Medicine** n = 48	**Geriatrics** n = 30
Antibiotic treatment								
Empirical choice								
Bi-therapy	215 (58%)	172 (59%)	43 (55%)	0.7	123 (69%)	63 (55%)	20 (42%)	9 (30%)
Use of fluoroquinolone	234 (63%)	187 (64%)	47 (60%)	0.7	148 (83%)	47 (41%)	20 (42%)	19 (63%)
Use of 3rd generation cephalosporin	113 (30%)	85 (29%)	28 (36%)	0.3	25 (14%)	59 (51%)	22 (46%)	7 (23%)
Use of amino glycosides	195 (52%)	165 (56%)	30 (38%)	0.007	120 (67%)	60 (52%)	14 (29%)	1 (3%)
Use of other classes	44 (12%)	28 (10%)	16 (21%)	0.01	8 (4%)	12 (10%)	12 (25%)	12 (40%)
Inadequate*	42/269 (16%)	17/210 (8%)	25/59 (42%)	<0.001	27/137 (20%)	4/76 (5%)	6/31 (19%)	5/25 (25%)
Adapted choice								
Bi-therapy	15 (4%)	13 (4%)	2(3%)	0.7	3 (2%)	11 (10%)	0 (0%)	1 (3%)
Use of fluoroquinolone	285 (77%)	242 (82%)	43 (55%)	<0.001	148 (83%)	85 (74%)	31 (65%)	21 (70%)
Use of 3rd generation cephalosporin	18 (5%)	11 (4%)	7 (9%)	0.1	9 (5%)	1 (1%)	5 (10%)	3 (10%)
Use of cotrimoxazole	52 (14%)	44 (15%)	8 (10%)	<0.001	13 (7%)	33 (29%)	5 (10%)	1 (3%)
Use of other classes	31 (8%)	9 (3%)	22 (28%)	<0.001	11 (6%)	7 (6%)	7 (15%)	6 (20%)
Inadequate*	18/269 (7%)	11/210 (5%)	7/59 (12%)	0.1	14/137 (10%)	1/76 (1%)	1/31 (3%)	2/25 (8%)
Total duration (days)	32	34	29	0.13	22	49	33	33
Bacterial failure at follow-up	37/153 (24%)	23/124 (19%)	14/29 (48%)	0.002	16/76 (21%)	2/32 (6%)	1/6 (16%)	4/9 (44%)
- same strain	7	3	4		8	0	0	0
- other strain	30	20	10		8	2	1	4
Clinical failure at follow-up	137/183 (75%)	98/135 (73%)	39/48 (83%)	0.3	88/123 (71%)	28/36 (78%)	8/10 (80%)	13/14 (92%)

BMC Infectious Diseases 2008, 8:12 doi:10.1186/1471-2334-8-12

Acute bacterial prostatitis in Korea : clinical outcome, including symptoms, management, microbiology and course of disease



International Journal of Antimicrobial Agents 31S (2008) S96–S101
U-Syn Ha, Min Eui Kim, Chul Sung Kim, Bong Suk Shim, Chang Hee Han, Sang Don Lee, Yong-Hyun Cho, Séoul, COREE

Prostatites aiguës en urologie : gravité majorée en cas de manœuvre préalable sur l'arbre urinaire

	avec manœuvre	sans manœuvre	*p*
Fièvre	79%	65%	0,0005
Douleurs	58%	45%	0,01
E. coli	46%	55%	0,35
Pseudomonas spp.	31%	8%	0,001
C3G S	79%	84%	0,66
Cipro S	53%	80%	0,04
Tobra S	67%	91%	0,04
Abcédation	14%	3%	0,001
Rechute	14%	8%	0,09
Chronicisation	11%	7%	0,37

Prévention : IU nosocomiales

Nonpayment for harms resulting from medical care: catheter-associated urinary tract infections

JAMA

Box. Hospital-Acquired Conditions Selected for Fiscal Year 2008 Final Rule (In Rank Order)

Serious preventable event—object left in place during surgery

Serious preventable event—air embolism

Serious preventable event—blood incompatibility

Catheter-associated urinary tract infections

Pressure ulcers (decubitus ulcers)

Vascular catheter–associated infection

Surgical site infection—mediastinitis after coronary artery bypass graft surgery

Hospital-acquired injuries—fractures, dislocations, intracranial injury, crushing injury, burn, and other unspecified effects of external causes

From Centers for Medicare & Medicaid Services.[3]

- «First, do not arm»
- Paradoxe du remboursement aux hôpitaux des frais des complications

→ - «First, do not pay for arm»

JAMA. 2007;298(23):2782-2784

Heidi L. Wald; Andrew M. Kramer, Denver - USA

Nonpayment for Harms Resulting From Medical Care: Catheter-Associated Urinary Tract Infections

- **IU/SAD, priorité d'action car :**
  - grande fréquence
  - coût élevé (> 1 000 $ / épisode)
  - codage aisé
  - recommandations de prévention (CDC 1981)

- **Changement attendu de la vision des cliniciens et hôpitaux :**
  - de la conséquence inévitable de l'hospitalisation…
  - …au dommage inacceptable résultant des soins

- **Système imparfait :**
  - des IU/SAD authentiquement inévitables (urologie…)
  - un risque de sur-dépistage (importation *vs* acquisition) et de sur-traitement (décolonisation)

JAMA. 2007;298(23):2782-2784

HL. Wald et al., Denver - USA

Preventing hospital-acquired urinary tract infection in the United States : a national study

- **Enquête auprès de 719 hôpitaux américains,**
- **Questionnaire adressé au « CLIN/EOH »**
- **72% de réponse**
- **État des lieux préoccupant :**

- relevé de la présence d'une SAD	**44%**
- relevé de la durée du sondage	**26%**
- « cathéter reminders » ou « stop-order »	**9%**
- étui pénien régulier	**14%**
- « bladder scan » régulier	**30%**
- cathéter imprégné d'antibiotique	**30% [bénéfice controversé]**
- antibiotique dans le sac	**3% [non recommandé]**

Clinical Infectious Diseases 2008;46:243-50

Saint S, Kowalski CP, Kaufman SR, Hofer TP, Kauffman SR, Hofer TP, Kauffman CA, Olmsted RN, Forman J, Banaszak-Holl J, Damschroder L, Krein SL., Ann Arbor – Michigan.

Emergency room staff education and use of a urinary catheter indication sheet improves appropriate use of foley catheters

Une simple feuille attachée à chaque emballage de SAD…

… et l'éducation qui va avec : ça marche !

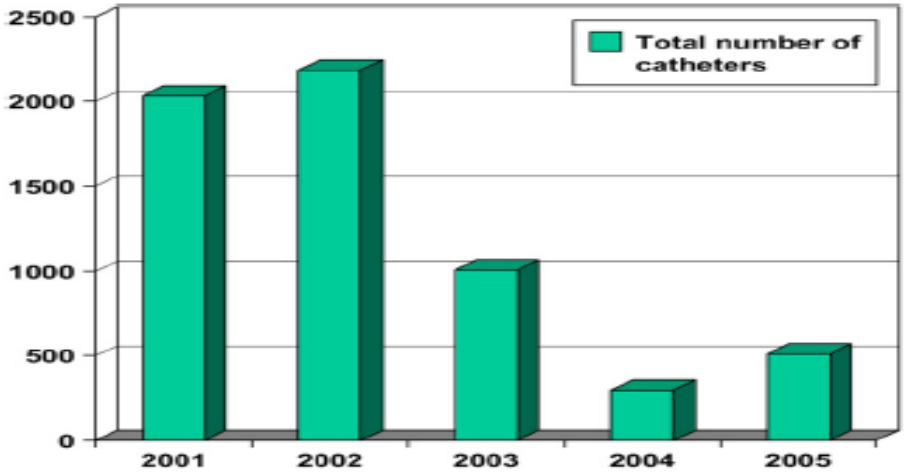
Indication Sheet for ordering a Foley Catheter

Please read the following criteria for appropriate use of Foley catheters and circle your reason for ordering the Foley catheter for this patient.

1. Obstruction of the urinary tract distal to the bladder
2. Alteration in the blood pressure or volume status requiring continuous, accurate urine volume measurement
3. A need to measure urine output accurately in an uncooperative patient (e.g., Intoxication).
4. Preoperative catheter insertion for patients going directly to the operating room
5. Continuous bladder irrigation for urinary tract hemorrhage
6. Urinary incontinence posing a risk to the patient (e.g., major skin breakdown or protection of nearby operative site)
7. To permit urinary drainage in patients with neurogenic bladder dysfunction and urinary retention
8. Palliative care for terminally ill

IF YOUR REASON FOR ORDERING A FOLEY IS NOT LISTED ABOVE, A FOLEY CATHETER MAY NOT BE INDICATED FOR THIS PATIENT.

The reason I think this patient needs a Foley catheter is: .....



à activité constante

Am J Infect Control 2007;35:589-93.

Ramana Murthy Gokula, Mindy Ann Smith, and John Hickner, Lansing - Michigan

Du fait d'un désistement de dernière minute,
un poste de CCA est disponible
dans le service des maladies infectieuses et tropicales
du CHU de Rouen
à compter du 1er novembre 2008.

Contact : Francois.Caron@chu-rouen.fr