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30	urnal or p	RIGINAL RESEARCH PAPER	Urology
Indian	ARIPET U	osocomial infection in the Infectious seases Department in Yalgado Ouédraogo niversity Hospital: about a case	<b>KEY WORDS:</b> Nosocomial infection, multiresistant, <i>Escherichia coli, Pseudomonas aeruginosa</i>
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RACT	Nosocomial infections are a public health issue because of their high morbidity and mortality. Three pathogens Escherichia coli, Staphylococcus aureus and Pseudomonas aeruginosa are frequently responsible. These are infections of exogenous of endogenous origin, which are often favored by increasingly invasive care techniques, occurring in more and more fragile patients and characterized by the emergence of multi-resistant bacteria. They increase the morbidity, mortality, and cost of baspital care		

The authors report a case of nosocomial infection occurring after a long hospital stay. The pathogens involved were Escherichia coli and Pseudomonas aeruginosa. Their prevention is essentially based on better application of hygiene rules and a rational

# Introduction

BS

Nosocomial infection is an infection that was absent at admission, but acquired during a hospital stay. When the precise situation at admission is not known, a period of at least 48 hours after admission or a period longer than the incubation period when it is known, is required. In the case of surgical wound infections, infections occurring within 30 days after surgery or within one year after surgery for a prosthesis or implant are accepted as nosocomial(15). Nosocomial infections are a public health issue, yet little known and poorly controlled in developing countries (7,11). These infections increase the morbidity, mortality, and cost of hospital care (15,16). Three pathogens, E. coli, S. aureus and P. aeruginosa are commonly responsible in Europe, but the situation in developing countries is poorly understood due to diagnostic difficulties. From a case of nosocomial infection, the authors remind the strategies for the prevention of these infections in the healthcare setting (14).

prescription of antibiotics in the healthcare setting.

### Observation

A 42-year-old patient, a pig farmer, was admitted on 16/05/2013 to the medical emergency department of the Yalgado Ouédraogo University Hospital for febrile convulsions in whom a cerebral tomodensitometry had objectified an anterior right temporal arachnoid cyst suggestive of cysticercosis. When he was transferred to the Infectious Diseases Department, a blood culture, a cyto bacteriological examination of the urine (UA), a thick drop and a retroviral serology made at the entrance in front of the infectious syndrome had become negative. Under treatment with albendazole and anticonvulsants, the development was marked by the appearance of an aphasia that motivated his transfer to a resuscitation department where he had been staying for 8 days and had received a urinary sounding. During his resuscitation a blood culture carried out had isolated E. coli sensitive to gentamicin, chloramphenicol, cotrimoxazole, ceftriaxone, amoxicillin + clavulanic acid and ciprofloxacin. He was then given ciprofloxacin for ten days. A UA requested on his return to the Department of Infectious Diseases, in front of a pyuria observed at the level of the urinary catheter, had isolated P. aeruginosa sensitive to ceftazidime, imipenem, ticarcillin, tobramycin. Ceftazidime was prescribed on the proportion of 2g / d and the progression was favorable. He left the hospital on 7/07/2013 after 52 days of hospitalization.

### Discussion

In our case, the incriminated bacteria had been isolated in the urine and the blood, respectively. The literature reports that nosocomial infections are often localized urinary or septicemic (10). P. aeruginosa had been isolated in the urine. This bacterium is ubiquitous, opportunistic (9,10), exhibiting natural resistance to many antibiotics. It also has a high capacity to develop resistant mutants (9), and to infect immunocompromised patients (9,13).

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This is the third leading cause of nosocomial infections (3.9). Our patient was carrying a urinary catheter. According to Leone (12), the urinary tract infection in a patient with a bladder catheter reflects a general hygiene policy, ranging from nursing while putting the probe in, to rigorous management of the ecology of the urine. (12). The hospital environment is a major source of crosscontamination. P. aeruginosa was multiresistant in our case (8,9) as in the majority of the cases of the Siah series in Morocco (17). He was sensitive to ceftazidime in contrast to the series of Clotilde and al, where P. aeruginosa had 100% resistance to this molecule (15). Our patient had stayed in the resuscitation department. Resuscitation is known to be the medical discipline where nosocomial infections are the most frequent (2.15). This situation is due, among other things, to the conjunction of the frequency of use of the invasive devices (1, 4, 8). E. coli was also isolated from blood culture. However, this bacterium is frequently isolated in the context of nosocomial urinary infections (7,18). The two bacteria isolated in our patient were Gram-negative bacilli which represent 60% of the bacteria described in the nosocomial setting, compared with 30% for the coccis (5,15). E. coli and P. aeruginosa, together with S. aureus, constitute the three bacteria most frequently involved in nosocomial infections (5). In the series of Haley and al, these two pathogens were the most incriminated (16). The course of the infection was favorable. The arrival of modern antibiotics makes it possible to fight effectively the infections which nevertheless remain very dangerous in case of coinfection.

### Conclusion

The control of invasive procedures and the rigorous application of infection control measures will make it possible to fight effectively against these nosocomial infections. The use of urinary sampling should be avoided as much as possible, interrupted as soon as possible, and challenged every day to prevent infections associated with care. It would be desirable to establish a hospital-wide policy for the prevention of nosocomial infections, based in particular on compliance with hygiene precautions, supplemented by an active strategy to control the spread of multi-resistant bacteria (MRB).

#### References

- Boutiba-Ben Boubaker I, Boukadida J, Triki O et al. Epidemic of nosocomial urinary infections with Pseudomonas aeruginosa multi-resistant to antibiotics. Pathology Biology, 2003, 51(3): 147-150
- 2 Bricha S, Ounine K, Oulkheir S, EL Haloui N. E., Attarassi B. Virulence factors and epidemiology related to pseudomonas aeruginosa virulence factors and epidemiology related to Pseudomonas aeruginosa. Tunisian Journal of Infectious Diseases 2009,(2):7-14
- Brion J,P., Morand, Petitjean O, Jehl F, Croize J, Stahl J, P. . Treatment of experimental meningitis with Pseudomonas aeruginosa with ciprofloxacin and fosfomycin. Med and Infect Diseases, 2000; 30(4):207–210
- Brun-Buisson C, Risks and control of nosocomial infections in intensive care units: guidance document SRLF/SFAR. Resuscitation. 2005, 14(6): 463-471
  CMIT. Colonisations et Infections urinaires associées aux soins. In E. PILLY : Vivactis
- 5 ČMIT. Colonisations et Infections urinaires associées aux soins. In E. PILLY : Vivactis Plus Ed ; 2012 :519-521.
- 6 CMIT. Pseudomonas Infections. In E. Pilly: Vivactis Plus Ed ; 2012 : 285-287.

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- 7 CMIT. Infections associated with care: generalities and prevention. In E. PILLY :
- Viractis Plus Ed 2012; 514-515. Dia N M, Ka R, Dieng C, Diagne R, M, L Dia, L. Fortes, B, M Diop, , A,I Sow P,S. Sow, Results of the prevalence survey of nosocomial infections at the Fann CHNU 8 (Dakar, Senegal). Med and Infect. Diseases, 2008,38(5): 270–274 Kienlen J. Pyogenic infections in intensive care. Conferences for updating 1998:
- 9 551-567
- Lambert P, A. Mechanisms of antibiotic resistance in Pseudomonas Aeruginosa. J R Soc Med 2002,95(41):22–26 10
- 11 Legras B., Feldmann L, Weber M., Burdin J.C. Declaration of nosocomial infections. A new approach based on bacteriology. Med and Infect Diseases, 1994, 24(6) : 798–800
- 12 Léone M, Arnaud S, Boisson C et al. Nosocomial urinary tract infections in intensive care: pathophysiology, epidemiology and prophylaxis. French Annals of Anesthesia and Resuscitation, 2000, 19(1):23-34 Nasnas R, Mohasseb G, Okais N, Nehme J, Samaha E, Nohra G, Treatment of
- 13 Maningtes with Pseudomonas and Acinetobacter by Amikaria administered intra-thecally. Med and Infect. diseases 1990, 20(11):573–578 OMS. Prevention of nosocomial infections Practical Guide 2nd edition. WHO/CDS/CSR/EPH/2002.12 Njall C, Adiogo D, Bita A, Ateba N, Sume G, Kollo B, Binam F, and Tchoua R.
- 14
- 15 Bacterial ecology of nosocomial infection in the resuscitation department of the Laquintinie hospital in Douala, Cameroun. Pan Afr Med J. 2013; 14: 140. Haley RW. Extracharges and prolongation of state attributable to nosocomial
- 16
- Finishing and the second se 17
- Richards MJ, Edwards JR, Culver DH, Gaynes RP. Nosocomial infections in medical 18 intensive care units in the United States. Critical Care Medicine. 1999;27:887-92