ICRI/CABSI in veterinary medicine

ICRI (Intravascular Catheter-Related Infections) and CABSI (Catheter-Associated Bloodstream Infections) are infections and sepsis caused by intravascular catheters. They are a type of nosocomial (veterinary clinic- or hospital-acquired) infection.



Rates

- 46% PVC/39% CVC complication rate (1, 2)
- 15%-39.6% of all IV catheters are bacteria-colonized (3-5)
- 6.7% 12% local catheter infection (1, 5, 7)
- 5.2% of bacterially colonized catheters result in sepsis (8)



- CABSI mortality rate: 4%-20%
- Prolonged hospitalization (6)
- Increased care costs (6)



Factors

- Bacterial colonization 46% MRP detected (1)
- Most common cause: Breaks in asepsis during positioning and handling
- Frequent disconnection (9)



Approaches & Solutions

- 71% of CVC infections are preventable (10)
- Improving hand hygiene reduces NI rate by 41 % (11)
- 48% reduction in NI through better process optimization and surveillance (12)





Our many years of process consulting and product development experience help us offer solutions and support tailored specifically to veterinary medical needs. Extensive information on infection prevention in veterinary medicine is available at:

www.bbraun-vetcare.com/ inyourhands



Sources

D-VE23009

- (1) Intravenous Catheters in Dogs and Cats: A Risk Factor Analysis. Vet Sci 2022; 9(3)
- (2) Adamantos S, Brodbelt D, Moores AL. Prospective evaluation of complications associated with jugular venous catheter use in a veterinary hospital. J Small Anim Pract 2010; 51(5):254-7.
- (3) Seguela J, Pages J-P. Bacterial and fungal colonisation of peripheral intravenous catheters in dogs and cats. J Small Anim Pract 2011; 52(10):531-5.
- (4) Jones ID, Case AM, Stevens KB, Boag A, Rycroft AN. Factors contributing to the contamination of peripheral intravenous catheters in dogs and cats. Vet Rec 2009; 164(20):616-8.
- (5) Guzmán Ramos PJ, Fernández Pérez C, Ayllón Santiago T, Baguero Artigao MR, Ortiz-Díez G. Incidence of and associated factors for bacterial colonization of intravenous catheters removed from dogs in response to clinical complications. J Vet Intern Med 2018; 32(3):1084-91
- (6) Ruple-Czerniak A, Aceto HW, Bender JB, Paradis MR, Shaw SP, van Metre DC et al. Using syndromic surveillance to estimate baseline rates for healthcareassociated infections in critical care units of small animal referral hospitals. J Vet Intern Med 2013; 27(6):1392-9.

- (7) Ruple-Czerniak AA, Aceto HW, Bender JB, Paradis MR, Shaw SP, van Metre DC et al. Syndromic surveillance for evaluating the occurrence of healthcareassociated infections in equine hospitals. Equine Vet J 2014; 46(4):435-40.
- (8) Saint, S., Veenstra, D., & Lipsky, B. (2000). The Clinical and Economic Consequences of Nosocomial Central Venous Catheter-Related Infection: Are Antimicrobial Catheters Useful? Infection Control & Hospital Epidemiology, 21(6), 375-380
- (9) Scheithauer S und Widmer S, Infektion und Sepsis durch intravaskuläre Katheter; Praktische Krankenhaushygiene und Umweltschutz; 4. Auflage 2018
- (10) Maas A, Flament P, Pardou A, Deplano A, Dramaix M, StruelensMJ. Central venous catheter-related bacteraemia in critically ill neonates: risk factors and impact of a prevention programme, J Hosp Infect, 1998 Nov:40(3):211-24.
- (11) Pittet D, Hugonnet S, Harbarth S, Mourouga P, Sauvan V, Touveneau S et al. Effectiveness of a hospital-wide programme to improve compliance with hand hygiene, Infection Control Programme, Lancet 2000; 356(9238):1307-12.
- (12) Greco D. Moro ML Tozzi AE. De Giacomi GV. Effectiveness of an intervention program in reducing postoperative infections. Italian PRINOS Study Group. Am J Med. 1991 Sep 16;91(3B):164S-169S.

