

(range) BMI was 28.0 (15–46). Taking all 335 CVCs together, the BMI of the patients was a mean of 27.3, whereas in 95 CVCs (28.4%), the BMI of the patients was at least 30 (for the subgroup of the obese patients the mean BMI was 33.8).

Complications of CVC insertion (bleeding, hematoma, >2 punctures, or malpositioning of the guidewire) were reported in 18.3% of obese patients and in 18.4% of non-obese patients. This indicates no increased risk for complications during CVC insertion among obese patients (odds ratio [OR], 0.99).

Comparing the CRBSI rate in obese and in non-obese patients we found no differences in CRBSI frequency (22.1% vs 23.3%; OR, 0.93).

Duration of CVC use appeared to be significantly shorter in obese compared with non-obese patients (13.5 vs 15.9 days). However, using the modified Infection Probability Score,<sup>6</sup> which is more stringent in defining neutropenia than the original IPS,<sup>7</sup> we found a higher modified Infection Probability Score at the time of CVC insertion in obese than in non-obese patients (7.6 vs 5.8). Interestingly, sex is not a risk factor for CRBSI in obese patients (men vs women, OR, 0.86 [95% CI, 0.32–2.35];  $P = .97$ ). CRBSI risk was increased neither for obese men (OR, 0.68) nor for obese women (OR, 1.58) (data are summarized in Table 1).

In our experience, CVC insertion with support of ultrasonography is a safe procedure in obese hematologic patients. Surprisingly, obesity could not be defined as a risk factor for CRBSI in our dataset. Using the modified Infection Probability Score<sup>6</sup> as a tool to describe the grade of illness of patients (with all critical parameters such as body temperature, heart rate, respiratory rate, absolute neutrophil count, and C-reactive protein as well as the Sequential Organ Failure Assessment score<sup>8</sup> being included), we found that obese patients had increased values and were therefore more challenged by the disease at the time of CVC insertion; however, the risk for CRBSI per se was not increased. One potential pitfall that could mask the CRBSI risk in obese patients is the duration of CVC use, which was significantly shorter (2–3 days shorter) in obese vs non-obese patients in the cohort investigated. CRBSI are known to be associated with the duration of CVC use.<sup>6,9</sup>

Another piece of data supporting our findings is the inverse association between obesity and risk of febrile neutropenia that has been reported recently.<sup>10</sup> Potential mechanisms include altered pharmacokinetics and/or reduced relative efficacy of chemotherapy due to obesity.<sup>10</sup>

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#### REFERENCES

- Hentrich M, Schalk E, Schmidt-Hieber M, et al. Central venous catheter-related infections in hematology and oncology: 2012 updated guidelines on diagnosis, management and prevention by the Infectious Diseases Working Party of the German Society of Hematology and Medical Oncology. *Ann Oncol* 2014;25:936–947.
- Graham AS, Ozment C, Tegtmeier K, Lai S, Braner DA. Central venous catheterization. *N Engl J Med* 2007;356:e21.
- McGee DC, Gould MK. Preventing complications of central venous catheterization. *N Engl J Med* 2003;348:1123–1133.
- Lawrence VJ, Kopelman PG. Medical consequences of obesity. *Clin Dermatol* 2004;22:296–302.
- Trick WE, Miranda J, Evans AT, Charles-Damte M, Reilly BM, Clarke P. Prospective cohort study of central venous catheters among internal medicine ward patients. *Am J Infect Control* 2006;34:636–641.
- Schalk E, Hanus L, Färber J, Fischer T, Heidel FH. Prediction of central venous catheter-related bloodstream infections (CRBSIs) in patients with haematologic malignancies using a modified Infection Probability Score (mIPS). *Ann Hematol* 2015 (in press); doi: 10.1007/s00277-015-2387-y.
- Peres Bota D, Mélot C, Lopes Ferreira F, Vincent JL. Infection Probability Score (IPS): a method to help assess the probability of infection in critically ill patients. *Crit Care Med* 2003;31:2579–2584.
- Vincent JL, Moreno R, Takala J, et al. The SOFA (Sepsis-related Organ Failure Assessment) score to describe organ dysfunction/failure: on behalf of the Working Group on Sepsis-Related Problems of the European Society of Intensive Care Medicine. *Intensive Care Med* 1996;22:707–710.
- Pepin CS, Thom KA, Sorokin JD, et al. Risk factors for central line-associated bloodstream infections: a focus on comorbid conditions. *Infect Control Hosp Epidemiol* 2015;36:479–481.
- Chao C, Page JH, Yang SJ, Rodriguez R, Huynh J, Chia VM. History of chronic comorbidity and risk of chemotherapy-induced febrile neutropenia in cancer patients not receiving G-CSF prophylaxis. *Ann Oncol* 2014;25:1821–1829.

## Patients with Psychiatric Disorders Can Also Have CLABSIs: A Response to “CLABSI or Munchausen’s or Both”

*To the Editor*—We read with interest the recent article “CLABSI or Munchausen’s or Both”<sup>1</sup> because, among other aspects, it addressed the interactions between patient

psychosocial status and general medical quality and safety measures. This is an important consideration. After all, from the ideals of the patient safety/quality improvement movement, safety is “everyone’s responsibility” and the patient is a member of the team. The inability of the patient to ally with the team’s goals diminishes teamwork and, thereby, increases the risk of errors or adverse outcomes.

However, we were disappointed with the dichotomy posed by the authors. In their analysis, the infection in the patient’s bloodstream was a manifestation of a psychiatric disorder and necessarily not a CLABSI. The article’s title entertained the possibility that the situation represented both Munchausen’s (actually named Factitious Disorder) as well as a CLABSI, but the authors determined that the patient-induced infection indicated that the infection was not a CLABSI. We disagree with this analysis for two reasons.

First, based on the information provided, the patient’s condition affirmatively appears to be a CLABSI. There is no reason not to classify this bloodstream infection as a CLABSI. Even though the patient’s symptoms could have possibly been caused by manipulation, it still counts as a CLABSI per the NHSN surveillance definitions based on the information provided. In the Centers for Disease Control and Prevention (CDC) Device-Associated Module (both the January 2014 and January 2015 releases<sup>2</sup>), it is noted that “Patients suspected or known to have accessed their own IV lines are not excluded from CLABSI surveillance. A facility must protect the line as best they can. Prevention efforts may include providing a patient sitter and/or removal of the catheter as soon as is clinically possible.” Every organization is responsible to report these infections to the best of their ability based on the surveillance definitions. Not doing so skews the data collected and reported to the Centers for Medicare and Medicaid Services (CMS).

From another perspective, there is no reason to exclude the infection simply because it was self-induced as a part of a psychiatric disorder. Instead, we would suggest that the individual whose body has a central line is a person vulnerable to a blood stream infection and that individuals with some psychiatric disorders may have a heightened degree of risk. There are several potential pathways toward CLABSI, and the presence of a psychiatric disorder should be considered as a potential mechanism by which an infection may occur either intentionally (as in this case) or unintentionally. Rather than excluding psychiatric conditions from CLABSI prevention, we propose increased attention to the interplay between psychiatric conditions and CLABSIs in individual cases as well as systematically, and such an analysis is now underway at our institution.

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#### REFERENCES

1. Kenneth M, Zangwill KM, Marin C, Vu H. A case of Munchausen’s syndrome or central line–associated bloodstream infection? Or both? *Infect Control Hosp Epidemiol* 2014;35: 1550–1551.
2. CDC Device-Assisted Module. Centers for Disease Control and Prevention website. [http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC\\_CLABScurrent.pdf](http://www.cdc.gov/nhsn/PDFs/pscManual/4PSC_CLABScurrent.pdf). Published 2015. Accessed March 10, 2015.

## Substandard Sanitation in Hospital Canteens Poses Problems in Developing Countries

*To the Editor*—Hospital canteens are places where patients and medical personnel typically take their daily meals. Adequate sanitation of the hospital canteen is required because its cleanliness impacts both patients and hospital employees. According to the recent report by Winston et al., 70% of doctors use their hospital canteen each week, with 2 visits per week on average.<sup>1</sup> We used a standard sanitation checklist to evaluate public canteens in 100 hospitals in Thailand. According to our survey, canteens in only 5 hospitals (5%) met the criteria noted in this standardized checklist (the standards can be seen at [nutrition.anamai.moph.go.th/temp/files/hospital/0.pdf](http://nutrition.anamai.moph.go.th/temp/files/hospital/0.pdf)). The checklist covers the important sanitation factors including eating place, kitchen and food preparation place, food and drink, eating utensils, waste managements, and cook and maid. Notably, all 5 hospitals were private facilities. In fact, the results of a previous survey from Thailand indicated the high prevalence of positive stool cultures and smears for parasites in hospital food handlers.<sup>2</sup> Clearly, poor hospital canteen sanitation leads to outbreaks of gastrointestinal infection; the report by White provides a good example of such an outbreak.<sup>3</sup> Indeed, sanitation standards in hospital canteens are an important issue that are commonly overlooked by hospital infection control authorities.<sup>4</sup> We anticipate that similar problems are found in the hospital canteens in other developing nations as well.