lution pulmonary artery (STPA) catheter in reducing risk of systemic infections associated with pulmonary artery catheterization. The shielded catheter is covered completely during balloon testing, preparation, and insertion.

To assess the value of this STPA catheter in the prevention of systemic infections associated with pulmonary artery catheterization, they conducted a randomized, prospective study over an 18-month period. The patients were randomly assigned to two groups, of which one received a standard pulmonary artery catheter and the other, the STPA catheter. The diagnosis of systemic infection was based on recovery of the same organism from the thermodilution catheter (TC) and from blood samples; absence of any other infectious focus; and improvement or resolution of clinical evidence of infection after removal of the TC. A total of 166 TCs were randomized in 150 patients.

Eight cases of systemic infection were diagnosed in the standard TC group, versus none in the STPA catheter group ($P<.002$). No cases of systemic infections occurred in those patients who had their TC for less than 4 days. A shielded pulmonary artery catheter may reduce the risk of systemic infections associated with prolonged pulmonary artery catheterization.

FROM: Cohen Y, Fosse JP, Karoubi P, Reboul-Marty J, Dreyfuss D, Hoang P, et al. The "hands-off" catheter and the prevention of systemic infections associated with pulmonary artery catheter: a prospective study. *Am J Respir Crit Care Med* 1998;157(1):284-287.

Infectious Complications Associated with Histamine$_2$-Receptor Antagonists

Investigators from the Department of Surgery, University of Washington, and Harborview Medical Center in Seattle conducted a study to determine the impact of histamine$_2$ (H_2)-receptor antagonist use on the occurrence of infectious complications in severely injured patients. Some previous studies suggest an increased risk of nosocomial pneumonia associated with the use of H_2-receptor blockade in critically ill patients, but other investigations suggest an immune-enhancing effect of H_2-receptor antagonists. The purpose of this study was to determine whether H_2-receptor antagonist use affects the overall incidence of infectious complications.

Patients enrolled in a randomized trial comparing ranitidine with sucralfate for gastritis prophylaxis were examined for all infectious complications during their hospitalization. Data on the occurrence of pneumonia were collected prospectively, and other infectious complications were obtained retrospectively from the medical record.

The relative risk of infectious complications associated with ranitidine use and total infectious complications were analyzed. Of patients whose 96 charts were available for review, sucralfate was given to 47, and 49 received ranitidine. Ranitidine use was associated with a 1.5-fold increased risk of developing any infectious complication (37/47 vs 26/47). Infectious complications totaled 128 in the ranitidine-treated group and 50 in the sucralfate-treated group ($P=.0014$). These differences remained after excluding catheter-related infections ($P=.0042$) and secondary bacteremia ($P=.0046$). The authors concluded that ranitidine use in severely injured patients is associated with a statistically significant increase in overall infectious complications when compared with sucralfate. These results indicate that ranitidine should be avoided where possible in the prophylaxis of stress gastritis.

FROM: O'Keefe GE, Gentilello LM, Maier RV. Incidence of infectious complications associated with the use of histamine$_2$-receptor antagonists in critically ill trauma patients. *Ann Surg* 1998;227:120-125.

Dialysis-Associated Diseases in the United States

The CDC's Hospital Infections Program and Hepatitis Branch have been conducting surveillance of dialysis-associated diseases in hemodialysis centers since the 1980s. Results of a 1995 survey on hemodialysis-associated disease and infection control practices in chronic hemodialysis centers in the United States were published recently.

A total of 2,647 centers responded, representing 224,954 patients and 54,194 staff members. Seventy-seven percent of centers reported that they reused disposable dialyzers. At the end of 1995, 65% of patients were treated with an arteriovenous graft, 22% with an arteriovenous fistula, and 13% with a temporary or permanent central catheter. By the end of 1995, at least three doses of hepatitis B vaccine had been administered to 35% of patients and to 82% of staff members.

Acute infection with the hepatitis B virus (HBV) occurred in 0.06% of patients and was more likely to be reported by centers with lower proportions of patients vaccinated against HBV. The prevalence of antibody to hepatitis C virus was 10.4% among patients and 2.0% among staff.

At least one patient with vancomycin-resistant enterococci was reported by 11.5% of centers, more commonly by hospitals (vs freestanding centers not located in hospitals) and government centers, and centers located in certain geographic areas. Vancomycin was received by 7.2% of patients in December 1995. The percentage of centers reporting patients with other pathogens was 7.9% for active TB, 39% for HIV, and 40% for methicillin-resistant *Staphylococcus aureus*.

FROM: Tokars JI, Miller ER, Alter MJ, Arduino MJ. National surveillance of dialysis associated diseases in the United States, 1995. *American Society for Artificial Internal Organs Journal* 1998;44:98-107.

Surveillance of Unexplained Illness and Death

Researchers from the CDC's Emerging Infections Program (EIP) recently summarized the findings from population-based surveillance studies being conducted by

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the Unexplained Illness Working Group partners that include the California EIP and Stanford University, San Francisco; Connecticut EIP, Hartford, Connecticut; Minnesota Department of Health; and the Oregon Health Division in Portland.

To identify unexplained critical illnesses and deaths of possible infectious causes, populations-based surveillance was established in San Francisco, California; New Haven, Connecticut; and two states, Oregon and Minnesota (total population, 7.7 million). A case was defined as a previously healthy person, 1 to 49 years of age, hospitalized with a critical illness or death of a potentially infectious cause with no etiology identified on initial testing. Case-finding included physician reporting, ICU surveillance, and death certificate review. Laboratory specimens and clinical and epidemiological data were collected. A specimen bank was established and tested using reference and research methods.

From May 1995 to March 1997, 95 cases (0.7/100,000 population/year) were reported. The median age of cases was 24 years (range, 1-49); 54 (57%) were female; 70 (74%) were white; 38 (40%) died, of whom 19 (50%) had autopsies. The most common syndromes were respiratory (36 [38%]); neurological (meningitis, encephalitis; 22 [23%]); and cardiac (myocarditis, pericarditis; 14 [15%]).

Testing of the first 40 cases revealed definite etiologies for 9 (23%): *Mycoplasma pneumoniae* (3), *Chlamydia pneumoniae* (2), Lyme disease (1), toxic shock syndrome (1), group C meningococcal disease (1), and influenza type A virus (1).

Despite a comprehensive testing approach, 31 (77%) of these first 40 cases remained unexplained, a proportion of which may have been caused by new pathogens. The magnitude of enigmatic, life-threatening illness in this young, previously healthy population underscores the need for continued surveillance and laboratory approaches to identify emerging infectious diseases.

FROM: Flood J, Cieslak PR, Relman D, Lopez F, Hendry M, Hajjeh R, et al. Surveillance of unexplained illness and death of possible infectious causes. Presented at the 35th Annual Meeting of the Infectious Diseases Society of America; September 13-16, 1997; San Francisco, CA. Abstract No. 39.

Additional news items of interest in this issue: Gerberding New Director of CDC's Hospital Infections Program, page 259; CDC's Epidemic Intelligence Service Portrayal in New Book, page 264; Nosocomial Transmission of Mycobacterium bovis, *page 283.*

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