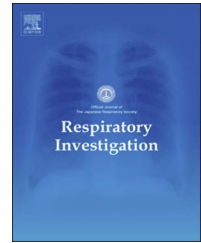




ELSEVIER

Contents lists available at ScienceDirect

Respiratory Investigation

journal homepage: www.elsevier.com/locate/resinv

Original article

Bacteriological testing and recurrence prevention efforts in the diagnosis and treatment of nursing- and healthcare-associated pneumonia and aspiration pneumonia: A questionnaire survey of hospitals across Japan

Tsuneaki Kenzaka^{a,b,*}, Ayako Kumabe^b, Koki Kosami^b,
Yasufumi Matsuoka^{b,c}, Kensuke Minami^d, Daisuke Ninomiya^e, Ayako Noda^f,
Shinsuke Yahata^a

^aDivision of Community Medicine and Career Development, Kobe University Graduate School of Medicine, Kobe, Japan

^bDivision of General Medicine, Center for Community Medicine, Jichi Medical University School of Medicine, Shimotsuke, Japan

^cDepartment of General Medicine, National Health Insurance Ooma Hospital, Ooma, Japan

^dDepartment of General Medicine, Toyooka Public Hospital, Toyooka, Japan

^eSatellite Center of Community Medicine, Ehime University Graduate School of Medicine, Toon, Japan

^fDepartment of General Medicine and Primary Care, University of Tsukuba Hospital, Tsukuba, Japan

ARTICLE INFO

Article history:

Received 30 January 2017

Received in revised form

24 October 2017

Accepted 5 December 2017

Keywords:

Aspiration pneumonia

Bacteriological testing

Nursing- and healthcare-associated pneumonia

Pneumococcal vaccine

Recurrence prevention

ABSTRACT

Background: Clinical practice guidelines for nursing- and healthcare-associated pneumonia (NHCAP) were developed for pneumonia caused by drug-resistant bacteria and pneumonia in elderly patients, particularly aspiration pneumonia. The identification of pathogenic bacteria and implementation of efforts to prevent the recurrence of aspiration pneumonia are very important in clinical practice. This study examined the extent to which clinicians have established bacteriological testing and recurrence prevention efforts for NHCAP and aspiration pneumonia.

Methods: Questionnaire surveys were mailed to the heads of internal medicine and respiratory medicine departments at 2490 Japanese hospitals. The questionnaire evaluated bacteriological testing for NHCAP or aspiration pneumonia and prevention of the recurrence of aspiration pneumonia.

Results: A total of 350 hospitals responded. These hospitals were grouped on the basis of whether a pulmonologist provided medical care for aspiration pneumonia and whether the

Abbreviations: NHCAP, nursing- and healthcare-associated pneumonia; CAP, community-acquired pneumonia; HAP, hospital-acquired pneumonia; ATS, American Thoracic Society; IDSA, Infectious Diseases Society of America; HCAP, healthcare-associated pneumonia; ACE, angiotensin-converting enzyme

*Correspondence to: Division of Community Medicine and Career Development, Kobe University Graduate School of Medicine, 2-1-5, Arata-cho, Hyogo-ku, Kobe, Hyogo 652-0032, Japan. Fax: +81 78 382 6283.

E-mail address: smile.kenzaka@jichi.ac.jp (T. Kenzaka).

<https://doi.org/10.1016/j.resinv.2017.12.005>

2212-5345/© 2018 The Japanese Respiratory Society. Published by Elsevier B.V. All rights reserved.

Please cite this article as: Kenzaka T, et al. Bacteriological testing and recurrence prevention efforts in the diagnosis and treatment of nursing- and healthcare-associated pneumonia and aspiration pneumonia: A questionnaire survey of hospitals across Japan. *Respiratory Investigation* (2018), <https://doi.org/10.1016/j.resinv.2017.12.005>

hospital employed an infectious disease specialist. For hospitals in which pulmonologists treated aspiration pneumonia, the response rates for “is done in nearly all cases” were 70.0%, 84.7%, 31.6%, and 48.9% for sputum gram staining, sputum culture tests, blood culture tests, and pneumococcal vaccination, respectively. In hospitals that employed an infectious disease specialist, the response rates for “is done in nearly all cases” were 72.8% and 41.3% for sputum gram staining and blood culture tests, respectively. Recurrence prevention for aspiration pneumonia (other than pneumococcal vaccination) was not actively implemented.

Conclusions: Sputum gram staining, sputum culture tests, and other bacteriological tests were implemented quite actively. However, physicians who treat aspiration pneumonia should implement efforts to prevent pneumonia recurrence more actively.

© 2018 The Japanese Respiratory Society. Published by Elsevier B.V. All rights reserved.

1. Introduction

The Japanese Respiratory Society published the clinical practice guidelines for nursing- and healthcare-associated pneumonia (NHCAP) in 2011 [1]. NHCAP has elements that are between those of community-acquired pneumonia (CAP) [2] and hospital-acquired pneumonia (HAP) [3] in Japan. The American Thoracic Society (ATS) and the Infectious Diseases Society of America (IDSA) made recommendations regarding the treatment of healthcare-associated pneumonia (HCAP) in the HAP guidelines that they published jointly in 2005 [4]. The NHCAP guidelines are the Japanese version of the HCAP guidelines. However, the meaning of “HC” (healthcare) in the guidelines jointly published by the ATS and IDSA is not always the same as that in Japan. The Japanese healthcare system is characterized by universal nursing care insurance for those aged 65 years and older and by universal health insurance for the entire population. NHCAP guidelines include both nursing-care-associated pneumonia and health-care-associated pneumonia.

The criteria for NHCAP are as follows:

1. Pneumonia diagnosed in a resident of an extended care facility or nursing home,
2. Pneumonia diagnosed in a person who has been discharged from a hospital within the preceding 90 days,
3. Pneumonia diagnosed in an elderly or handicapped person who needs long-term care and has a performance status of 3 or 4, based on the Eastern Cooperative Oncology Group criteria [5], or
4. Pneumonia diagnosed in a person who is receiving regular outpatient endovascular treatment (e.g., dialysis, antibiotic therapy, chemotherapy, or immunosuppressant therapy).

The clinical practice guidelines for NHCAP were developed for pneumonia caused by drug-resistant bacteria, which is a consequence of advanced medical care, and elderly pneumonia (especially aspiration pneumonia) in Japan [1]. In fact, more multidrug-resistant pathogens have been reported in the literature for NHCAP than for CAP [6,7]. The mean age of individuals affected by NHCAP is 6–9 years older (mean age for NHCAP is approximately 80 years) compared to those affected by CAP [6,7]. In addition, 63% of NHCAP cases involve

aspiration pneumonia [5]. However, *Streptococcus pneumoniae* was the leading pathogen for NHCAP. Moreover, common pathogenic bacteria are often detected in NHCAP, similar to CAP. Many patients with NHCAP do not need broad-spectrum antibiotic therapy that targets multidrug-resistant pathogens [8]. The high mortality in patients with NHCAP is the result of patient background or disease severity rather than the presence of multidrug-resistant pathogens [8]. HCAP was removed and categorized under CAP in the IDSA/ATS 2016 clinical practice guidelines for hospital-acquired and ventilator-associated pneumonia because resistant bacteria were not encountered very frequently, and patients with NHCAP generally visited an emergency department [9]. Drugs such as angiotensin-converting enzyme (ACE) inhibitors [10] and cilostazol [11] are effective for the treatment of aspiration pneumonia and prevention of its recurrence. Moreover, the patient's level of consciousness [12,13], drugs that cause swallowing difficulty [14], and the patient's head position while sleeping [15] might cause the recurrence of aspiration pneumonia. Patients with aspiration risk were at a greater risk of poor long-term outcomes with increased 1-year mortality, increased risk of rehospitalization, and a strong association with recurrent admissions for pneumonia [16]. Therefore, bacteriological testing to identify pathogenic bacteria and efforts to prevent the recurrence of aspiration pneumonia are very important in the clinical practice for NHCAP.

However, since the publication of the guidelines, the conditions of actual medical care provided by clinicians about bacteriological testing and recurrence prevention have not been adequately surveyed. Therefore, the present study was performed to survey the compliance rate among clinicians for the implementation of bacteriological testing and recurrence prevention in patients with NHCAP or aspiration pneumonia using the same database as in our previous studies [17,18].

2. Patients and methods

2.1. Study design

This was a cross-sectional study conducted using questionnaire responses. The Research Ethics Committee and Epidemiological

Download English Version:

<https://daneshyari.com/en/article/8750708>

Download Persian Version:

<https://daneshyari.com/article/8750708>

[Daneshyari.com](https://daneshyari.com)