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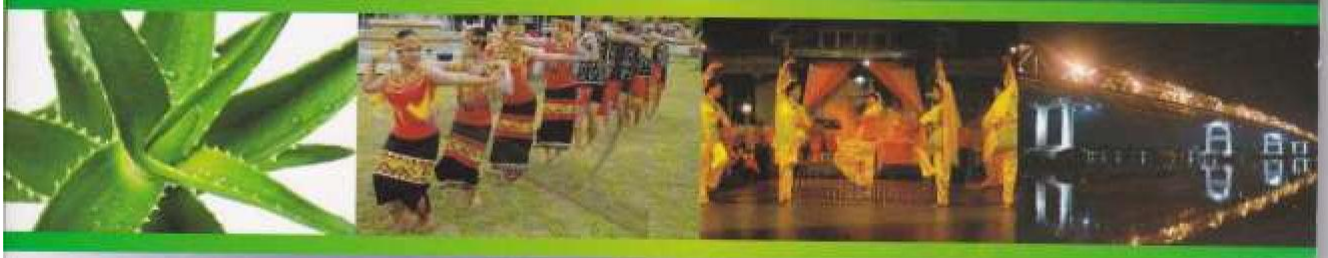

Theme:
Continous Quality Improvement in Nursing Education toward Quality in Nursing Care and Services in the Era of ASEAN Economic Community

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CONTENT

GREETING MESSAGE

Assalamualaikum warahmatullahi wabarakaatuh

AIPNI menyelenggarakan Rapat Tahunan Anggota yang ke-13 sesuai amanat dalam AD/ART AIPNI, Bab II pasal 6 yang menyatakan bahwa: Kegiatan rapat AIPNI terdiri atas (b) RapatTahunan Anggota (RTA). Pada Pasal 12 Tugas dan Kewenangan Pengurus AIPNI ayat (5) Melaksanakan RTA setiap tahun dan rapat-rapat lainnya. Memperhatikan amanat yang termuat didalam AD/ART tersebut maka RTA akan diselenggarakan di Pontianak sesuai keputusan yang diamanatkan dalam RUA ke-4 AIPNI di Banda Aceh tahun 2013.

Memasuki tahun ke-13, AIPNI akan terus berupaya memperjuangkan peningkatan mutu pendidikan keperawatan di Indonesia agar setara satu sama lain sesuai standar yang ditetapkan. AIPNI terus mendorong anggota untuk menciptakan dan mengembangkan budaya mutu agar terjadi perbaikan dan pengembangan terus menerus (Quality Improvement) sehingga tercapai kualitas pelayanan kesehatan (Quality Cascade) sesuai yang diharapkan oleh masyarakat. Terciptanya budaya mutu dan pencapaian kualitas pelayanan yang baik akan meningkatkan daya saing perawat baik di tingkat regional ASEAN maupun tingkat internasional.

Dalam upaya *Quality improvement* maka AIPNI telah melakukan berbagai kegiatan pembinaan kepada anggota baik langsung maupun tidak langsung, terlibat dalam implementasi akreditasi profesi Ners melalui Lembaga Akreditasi Mandiri-Kesehatan (LAM-PT Kes) dan persiapan uji kompetensi Ners melalui keterlibatan dalam Lembaga Pengembangan Uji Kompetensi (LPUK) serta pengurusan ijin program studi Ners bagi anggota yang belum berijin. Berbagai kegiatan yang telah dilakukan di atas adalah untuk meningkatkan kualitas penyelenggaraan pendidikan yang dikelola oleh para anggota AIPNI. Untuk mencapai mutu institusi yang optimal dalam menghadapi berbagai tantangan saat ini, diperlukan penataan sistem pendidikan tinggi yang mendasar agar dapat mengantisipasi kebutuhan di masa depan. Dibutuhkan pula kemampuan institusi pendidikan Ners dalam menjalankan programnya sesuai dengan standar pendidikan melalui akreditasi.

RTA Ke-13 tahun 2014 di Pontianak selain melanjutkan program kerja yang masih relevan juga untuk menyampaikan pertanggung jawaban kepengurusan periode 2013-2017 serta membahas berbagai isu-isu penting terutama pada peningkatan kualitas proses belajar mengajar baik akademik maupun profesi melalui penjaminan mutu internal dan eksternal, pemanfaatan lulusan, serta penataan kualitas penyelenggaraan pendidikan.

Semakin tua usia asosiasi diharapkan akan semakin matang dalam mengendalikan institusi yang tidak taat azas serta mampu menjamin setiap anggotanya mematuhi azas, kebijakan, dan peraturan yang berlaku dalam sistem pendidikan tinggi Keperawatan di Indonesia.

Banyak hal yang harus dibahas dalam sidang asosiasi yang memerlukan pemikiran, analisis, dan pengambilan keputusan yang mantap dari seluruh anggota terutama yang hadir pada RTA ini. Kita bersama-sama memberikan kontribusi ide, saran dan kritikan yang konstruktif demi kemajuan Asosiasi dan kemajuan sistem pendidikan tinggi Keperawatan kita.

Terimakasih, selamat mengikuti RTA dan selamat menikmati keindahan bumi khatulistiwa.

Wassalamualaikum wr wb.

Muhammad Hadi
President of AINEC

A/Prof Chow Yeow Leng

Director of Education & Master of Nursing Program Coordinator Alice Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore. A/Prof Chow obtained her Registered Nurse and Mental Health Nurse qualifications in UK and has been in nursing education for more than 25 years. She is the Director of Education and Master of Nursing program coordinator at the Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, and National University of Singapore. Prior to her current position, she was the Deputy Director overseeing Continuous Education and Training Division of the School of Health Sciences, Nanyang Polytechnic, (NYP). Her primary interest is in Aged Care. She started the first Advanced Diploma in Nursing (Gerontology) course at NYP in 1996, two years later, together with a group of Gerontological nurses, they set up the Gerontological Nurses Chapter, Singapore Nurses Association, she is now the advisor. She is the Council member of the Gerontological Society of Singapore, a member of the National Dementia Network group, Ministry of Health, Person-Centre Care committee, Alzheimer Disease Association of Singapore and Board member of the Home Nursing Foundation. She co-chairs the Advanced Clinical Education Committee, Singapore Nursing Board, and MOH. She was involved in several Advanced Practice Nurse related committees in the past such as Advanced Practice Nurse Competency Workgroup and Independent Prescriptive Authority Committee. She provides educational services and chairs the Ethics Committee in Peacehaven Nursing Home. She supervises Honors projects, Master and PhD projects and thesis. In addition to aged care, her other areas of interest are palliative care, healthcare ethics and education pedagogy.

For over 30 years, Prof. Chair has made significant contribution to the fields of nursing education and cardiovascular nursing. She has received her PhD Nursing degree in 2004 from University of Colorado at Denver, USA. She has an advanced clinical experience in critical care and cardiovascular nursing for over 14 years. She was a Critical Care Registered Nurse with American Association of Critical Care till 2005. Also she has been an Advanced Cardiac Life Support for the American Heart Association since 1996.

Prof. Chair is the Director and Professor of the Nethersole School of Nursing in the Chinese University of Hong Kong. She has been appointed as a Visiting Professor of Dalian Medical University at Liaoning China, Central South University and Hunan Provincial People's Hospital at Hunan China.

As a distinguished scientist and author, Prof. Chair has published more than 190 articles in international referred journals and obtained 18 competitive grants in her 16 years academic career. In 2007, she was awarded the First Prize of Excellence in Acute & Critical Care Award from the British Journal of Cardiac Nursing & British Association of Nursing in Cardiac Care. In the same year, she also won the Master of Teaching Award at the Chinese University of Hong Kong. Currently, she is serving on the editorial boards as Associate Editor for Journal of Connect: The World of Critical Care Nurses, Associate Board Member of Journal of Research in Nursing and Editorial Broad Member of the Asian Nursing Research. For recent years, Prof. Chair has been invited as a speaker in various conferences and seminars locally and internationally.

Prof. Chair is the Founder of the Hong Kong Cardiac Nursing Association and the President of Hong Kong College of Cardiac Nursing, one of the 14 Colleges in Provisional Hong Kong Academy of Nursing. She had been invited to provide Expert Opinion Reports and be the Expert Witness of different cases in Coroner Court. She is also an Honorary Advisor of Hong Kong Society for Nursing Education, Hong Kong College of Medical Nursing, Hong Kong Association of Renal Nursing and Hong Kong Sheng Kung Hui Lady Maclehose Center. She is a Nominated Consultant of the Hong Kong Marfan Syndrome Association and a Member of Alice Ho Miu Ling Nethersole Charity Foundation. She is also the Strategic Partner and Consultant of the 'Care and Integration Health Program' of the New Home Association and a Member of Accreditation Committee of the Nursing Council of Hong Kong.

TERESITA R. IRIGO-BARCELO, PhD, R.N.

PRESENT POSITION:

- Dean, School of Nursing Centro Escolar University, Mendiola, Manila

OTHER PRESENT INVOLVEMENT:

- Member, Technical Panel for Nursing Education Commission on Higher Education (2009-2014)
- Member, Project Advisory Committee, International Labour Organization, Decent Work Across Borders Project 2012- present
- Member, Department of Health, Health Human Resource Development Network, 2010- present
- Member, Technical Working Group for the Amendments to the Nursing Law, Board of Nursing, Professional Regulation Commission
- Peer Reviewer, Philippine Journal of Nursing, official publication of the Philippine Nurses Association, 2010- present
- Trainer and module writer, National Nursing Core Competency Standards, Professional Regulation Commission Board of Nursing, 2012- present
- Module writer, Labor and Migration, commissioned by the International Labor Organization, 2013-present

RELATED WORK EXPERIENCES

- National President (2009- 2011) Philippine Nurses Association
- Governor, Philippine Nurses Association NCR Zone 1 Manila Chapter (2009- 2012)
- Member, Continuing Education Council for Nursing (2009-2011) Professional Regulation Commission
- Consultant, Professional Regulation Commission (commissioned to write the Manual of Orientation for Professional Regulatory Boards July 2009-March 2010; book launching June 18, 2010)
- Head, Research and Creative Writing Program (2007-2010) College of Nursing, University of the Philippines Manila
- Professor VII (full time until compulsory retirement April, 2010) College of Nursing, University of the Philippines Manila
- Vice Chancellor for Academic Affairs, UP Open University,(2001-2004)
- Technical consultant, Development of Standards of Practice in Maternal and Child Nursing completed 2002 and approved for implementation in 2004 by the Board of Nursing, Professional Regulation Commission
- Member, Task Group on Faculty Development, Education Sector Development Program, CHED, 2001-2004
- Consultant, Continuing Professional Education, Professional Regulation Commission, (1995-1999)
- Short Term Consultant on Nursing-Midwifery Education in Vietnam, WHO, Dec. 16, 1995 – Jan.15,1996

- Technical Consultant on Midwifery Education, Dept of Education, Bureau of Higher Education 1994
- Nurse-Midwife Member, PRC Board of Midwifery, (1988-1995)
- Associate Professor, College of Nursing (rank until optional retirement 1989) University of Santo Tomas

RESOURCE SPEAKER

Taught the following topics such as maternal and child health, ethico-legal dimensions of nursing practice, professional ethics and values, distance education, test and measurement, authentic assessment, research

EDUCATIONAL ATTAINMENT

- Ph.D. in Development Education, University of Santo Tomas, 1989
- Master of Arts in Nursing, University of Santo Tomas, 1973
- Bachelor of Science in Nursing, University of Santo Tomas, 1965, cum laude

PUBLICATIONS

a. Book

- Editor, Philippine edition, Understanding Nursing Research, Burns and Grove, Elsevier Saunders, Singapore, 2013
- Barcelo, Teresita; Balabagno, Araceli; Bonito, Sheila. Integrating Health and Wellness in the Elementary Curriculum: A Teacher's Guide, six volumes, Anvil Publishing, 2008
- Faculty of the College of Nursing. Competency-based BSN Curriculum. Monograph published by UP Manila College of Nursing 2006 (Barcelo is a contributor in 3 subjects)
- Tuazon J, Barcelo T, Corcega T, Layug M E, Mencias C. Integrating Prevention and Control of Smoking/ Tobacco Use in the Nursing Curriculum, monograph, DOH and WHO-WPRO, 2004
- Barcelo, T., Laurente, C., Ballestero, A." A Framework for the integration of adolescent health and development concepts into pre-service health professional educational curricula" monograph published by WHO Western Pacific Regional Office, 2002
- Barcelo T. Chapter 6: Natural family planning and Chapter 11: Trends and Issues in Reproductive Health. In A Reference Manual on family planning for schools of midwifery in the Philippines. Manila: APSOM, 1994 (the Manual was translated in Vietnamese)
- Layo-Danao, L Laurente, C and Barcelo, T. Human Resource development in Nursing, monograph published by WHO-WPRO, 1992
- **LIST OF COMPLETED RESEARCH** (other than masters thesis and doctoral dissertation) ☐ Principal Investigator. Factors affecting food purchase of supermarket shoppers in Metro Manila, funded by the Department of health, 2003
- Principal Investigator. Integration of adolescent health and development concepts into pre-service health professional educational curricula in Western Pacific Region, funded by WHO Western Pacific Regional Office, 2001
- Principal Investigator, Nursing in APEC-member countries, funded by the Philippine Nurses Association, 1998
- Barcelo, T. Aptitude, Study Orientation, personality traits and academic performance of students in the Master of Arts in Nursing by distance mode. Completed 1997

- Principal Investigator, Five year performance (1990-94) of schools in various licensure examinations of the Professional Regulation Commission, funded by Professional Regulation Commission, 1995
- Barcelo, T. Needs Assessment for Distance education in nursing in the Philippines, completed 1994
- Barcelo, T. Evaluation of the masters program of the UP College of Nursing completed 1994

MEMBERSHIP IN PROFESSIONAL ORGANIZATION

- Member, Pi Lambda Theta, Philippine Chapter (International Honor Society for Education). 1996 – present
- Member, Sigma Theta Tau International, The International Honor Society for Nursing, March 2014-
- Founding President, Nurse4Life, a Prolife organization of nurses
- Honorary member, UP College of Nursing Alumni Association
- Founding member, The Honor Society for Nursing, UP Manila
- Founding Vice President, Philippine Nursing Research Society, 2007- present
- Life Member, Philippine Nurses Association
- Life member, Catholic Nurses Guild

PROFESSIONAL AWARDS

- 2012 Outstanding Women Leaders in Manila (Education), given March 26, 2012, awarded by City of Manila and Soroptomist International, Sampaloc District
- UP Manila Outstanding Teacher 2008, University of the Philippines Manila
- National Finalist, Metrobank Foundation National Search for Outstanding Teacher Award (Tertiary), 2007
- Anastacia Giron Tupas (AGT)Award the highest award given by PNA to outstanding professional nurses 2000
- UP Centennial Professorial Chair, 2009
- UP Centennial Faculty Grant, 2008
- Julita Sotejo Professorial Chair, 2006, College of Nursing, University of the Philippines Manila
- Diamond Jubilee Professorial Chair, 2000-01, College of Nursing, University of the Philippines, Manila
- Outstanding Achievement in Development Education for the Decade of the Nineties awarded by the UST Graduate School Alumni Association, December 1999
- The Outstanding Thomasian Alumni in Health (TOTAL) the highest award given the University of Santo Tomas to its alumni 1998
- Most Outstanding Nurse Educator 1997, UST Nursing Alumni Association

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Title : **Identification of Bacterial** PiólJf•zsóoa \• Paovn\ wizh **Endotracheal Tube (ETT)** •s:.tbe"C.suae of".Vdo¢âlatowAsaosia rtd **Pneumonia (VAP) at the** TCU oF Merdi WéluyeRzg$óaal **Hospitalof Blitar**

Authors : Yuly Peristiowati*, Byba Mêlda Suhitá*,üàndu Si yoto *, Erni Firmadani**

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ABSTRACT

Introduction: Bacterial colonization of the airways potentially occurs in patients with endotracheal tube (ETT). This infection is called ventilator-associated pneumonia (VAP) that occurs more than 48-72 hours after the placement of a ventilator. VAP contributes 30% of deaths from infectious diseases. Pathogenic coloniesof oropharynxand microorganisms within secretions of an endotracheal tube (ETT) circuit will be aspirated, resulting in pneumonia. In addition, placement of an endotracheal tube will result in damaged cough reflex, slowing down of mucociliary escalator movement and increased mucous secretion. **Methods:** Observational design with a cross-sectional approach; sample was patients with an endotracheal tube and a mechanical ventilator atthe ICU of Mardi Waluyo Regional Hospital of Blitar. **Result:** Results showed that 25% of respondents had signs of VAP,i.e. increased body temperature, increased number of leukocytes, decreased values of PaO2, shortness of breath and increased production of secretions. Identification of bacterial proliferation indicated 5 types of gram-negative bacteria as the cause of ventilator-associated pneumonia (VAP),i.e. *Pseudomonas aeruginosa*, *Staphylococcus epidermidis*, *Staphylococcus aureus*, *Acinetobacter baumannii* (94.11%), and *Enterobacter gergoviae* (93.93%). All bacteria were gram-negative after gram-type identification of bacterial colonies. Results of microbat system examination showed that the gram-negative bacterial colonies contained lysine, omithine, glucose, xylose and citrate.

Keywords : Bacterial Pneumonia, Endo Tracheal Tube (ETT), Ventilator Associated Pneumonia (VAP)

Identification of Bacterial Growth in Patients with Endotracheal Tube (ETT) as a cause of Ventilator-Associated Pneumonia (VAP) in Intensive Care Unit Rooms

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1. Nursing Study Program of STIKes Surya Mitra Husada Kediri
2. Public Health Study Program of STIKes Surya Mitra Husada Kediri

ABSTRACT

Bacterial colonization of the airway potentially occurs in patients intubated with endotracheal tube (ETT). The most common infection is ventilator-associated pneumonia, one that occurs more than 48-72 hours after intubation. Intubation with an ETT leads to pathogenic colonization in the oral cavity and oropharynx. The purpose of the present study was to identify bacterial growth in ETT-intubated patients as the cause of ventilator-associated pneumonia (VAP) in the ICU rooms. It was cross-sectional study with a sample of 6 patients who were intubated with an ETT, using a mechanical ventilator and suffering from an ventilator-associated pneumonia (VAP). Results showed that 25% of the respondents suffered from VAP, 50% had an increase in body temperature of 37.6°C to 39°C, 25% had an increase in leukocytes of 11,000 to 20,000/mm^2 and decreased levels of PAO_2, 75% had an ARDS, shortness of breath and increased production of secretion. Results of identification of bacterial growth showed 5 types of gram-negative bacteria as the cause of VAP: *Pseudomonas aeuginosa*, *Staphylococcus epidermidis*, *stapilococcus aureus*, *Acinetobacter baumami* (94.11%), and *Enterobacter gergoviae* (93.93%). Results of the Microbat system examination indicated a gram-negative bacterial colony containing lysine, omithine, glucose, xylose and citrate. Identification of VAP-causing bacteria can provide information and an overview of bacterial colonies in the ICU rooms to help the establishment of diagnosis, provision of nursing care and determination of pharmacological action taken.

Keywords: Bacteria, endotracheal tube (ETT), pneumonia-associated ventilator

INTRODUCTION

Infection related to health care through the placement of invasive medical devices in Intensive Care Unit (ICU) rooms is among the important factors jeopardizing patient recovery during health care. These patients have a high risk of nosocomial infection.[1]

In general, patients in the ICU rooms have risk factors of underlying diseases and immune disorders, especially those patients with invasive devices such as a ventilator. A ventilator connected via an endotracheal tube to the patient constitutes the precipitating factor of infection (ventilator-associated pneumonia). Moreover, a prolonged placement of these invasive devices can facilitate nosocomial infection to the patients.[12] Bacterial colonization of the airway potentially occurs in patients intubated with an endotracheal tube (ETT). And this has a high risk of nosocomial infections. The most common infection is ventilator-associated pneumonia, one that occurs more than 48-72 hours after intubation.[3,4] In Indonesia, a study conducted in all hospitals in Yogyakarta showed that the proportion of nosocomial infections ranged from 0% to 12% with an overall average of 4.26%. The average treatment period was 4.3 to 11.2 days, with an average of 6.7 days. However, there is no accurate data regarding the rate of nosocomial infections in Indonesia. The government has been trying to prevent nosocomial infections by means of Decree of the Minister of Health Number 270/Menkes/III/2007. However, no accurate report on the outcome of this policy.[2,5]

METHODS

The present study used the observational design with a cross-sectional approach. The sample was 6 patients intubated with an endotracheal tube, using a mechanical ventilator, and having a ventilator associated pneumonia (VAP) at an ICU room of a Hospital in Blitar.

STAGES OF THE STUDY

The present study was conducted at an ICU room of one of hospitals in Blitar. The study instrument used was a bacterial growth observation sheet by means of examining the culture of patients intubated with an endotracheal tube. Additionally, the study also used an observation sheet for the signs of the occurrence of ventilator-associated pneumonia (VAP) observed at <24 hours and 24–48 hours and disposable catheters. Furthermore, the signs of ventilator-associated pneumonia (VAP) were observed using a CPIS sheet, including PaO_2/FiO_2, tracheal secretions, leukocytes, temperature (Celsius) after 48 hours after the placement of a mechanical ventilator.

DATA ANALYSIS

Data derived from bacterial identification using Microbact 12A/E-24E were subjected to descriptive analysis. In order to analyze pneumonic events, respondent's responses from each component were tabulated as shown in Table 1. In the event that the total CPIS score was more than or equal to 6, then the VAP diagnosis can be established. In the event that the total CPIS score was less than 6, then the VAP diagnosis was excluded. Furthermore, descriptive analysis was carried out.

RESULTS AND DISCUSSION

Results

The results indicated that 25% of respondents had signs of VAP, including an increase in body temperature, an increase in leukocyte count, and a decrease in PAO_2 levels, shortness of breath, and an increase in production of secretions.

Results of identification of the signs of Pneumonia

a. Identification of body temperature

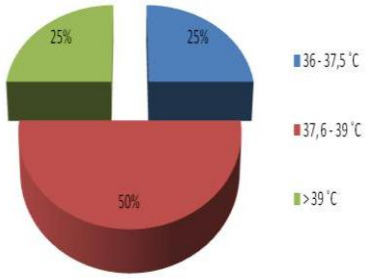

Figure 1. The pie chart of the body temperature of patients with a ventilator in the ICU room.

b. Identification of leukocyte count

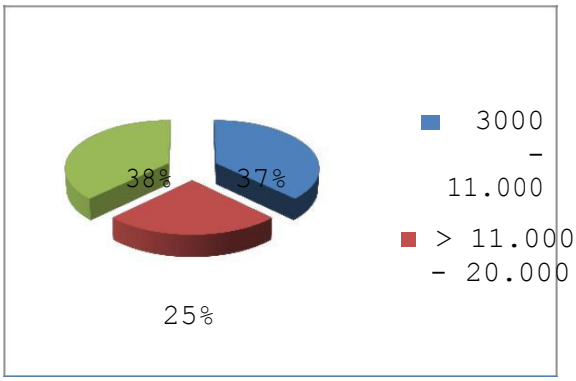

Figure 2. The pie chart of the leukocyte counts of patients with a ventilator in the ICU room.

c. Identification of PaO_2 levels

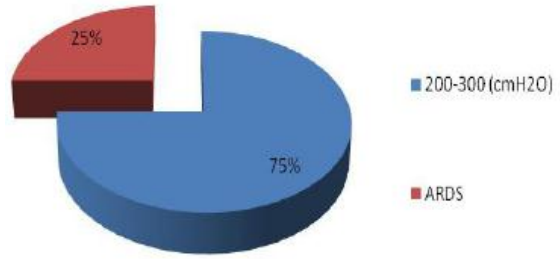

Figure 3. The pie chart of the PaO2 levels of patients with a ventilator in the ICU room.

d. Identification of gram-negative bacteria of sample 4 (*Acinetobacter baumami*, 94.11%)

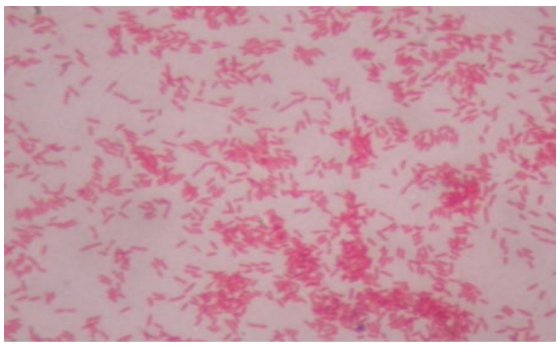

Figure 4. Identification of gram-negative bacteria of sample 4 (*Acinetobacter baumami*, 94.11%)

Identification of bacterial growth showed 5 gram-negative bacteria that caused ventilator-associated pneumonia (VAP): *Pseudomonas aeuginosa*, *Staphylococcus epidermidis*, *stapilococcus aureus*, *Acinetobacter baumami* (94.11%), and *Enterobacter gergoviae* (93.93%). All of those bacteria were gram-negative after identification of gram types in bacterial colonies. The Microbat system examination indicated that those gram-negative bacterial colonies contained lysine, omithine, glucose, xylose and citrate.

DISCUSSION

Results of the present study showed that 25% of respondents had signs of VAP, including an increase in body temperature, an increase in leukocyte count, a decrease in PAO_2 levels, shortness of breath and an increase in production of secretions. Results of identification of pneumonic signs showed that 50% of the respondents had an increase in body temperature of 37.6°C to 39°C. Results of identification of leukocyte count showed that 25% of the respondents had a leukocyte count of 11,000 to 20,000/mm^2 and decreased levels of PAO_2. Additionally, 75% of the respondents had an ARDS. Results of identification of bacterial growth showed that there were 5 gram-negative bacteria that caused ventilator-associated pneumonia (VAP): *Pseudomonas aeuginosa*, *Staphylococcus epidermidis*, *stapilococcus aureus*, *Acinetobacter baumami* (94.11%), and *Enterobacter gergoviae* (93.93%). All of those bacteria were gram-negative after identification of gram types in bacterial colonies.

It is known that the occurrence of ventilator-associated pneumonia (VAP) is related to bacteremia. This infection is generally the result of aspiration of potential pathogens that colonize the oropharyngeal mucosa. Intubation of patients does not only interfere with the barrier between the oropharynx and trachea, but it also facilitates the entry of bacteria into the lungs through the pools and leakage of contaminated secretions around the endotracheal tube (ETT) cuff. [6,7] This phenomenon occurs in most patients with intubation, wherein the supine position can facilitate it. In previously healthy patients and new inpatients, normal oral flora or pathogens are associated with community-acquired pneumonia. In patients treated for more than 5 days, gram-negative bacteria (GNB) and *S. aureus* often colonize the upper airways.[2,6,8]

In rare cases, VAP can occur through other pathways. Macroaspiration of gastric fluid occurs in some patients. Condensation on the ventilator tube entering the patient's airways leads to it. Fiberoptic bronchoscopy (FOB), tracheal suction, or manual ventilation with contaminated devices can also carry pathogens to the lower respiratory tract. Recently, attention is drawn to the important role of contaminated nebulizers in the occurrence of VAP; however, this device is rarely associated with VAP.[3,7,9]

Other sources of VAP-causing pathogens include those of the paranasal sinuses, dental plaques, and the subglottic region between the vocal cord and the ETT cuff. The role of the gastrointestinal tract as a source of GNB colonization in the oropharynx and trachea is controversial. Several studies, using radioactive-labeled gastric fluid or several other techniques, demonstrated that gastric fluid in intubated patients was aspirated in the tracheobronchial tract within a few hours. Alkalinization of gastric fluid seems to be a prerequisite for this mechanism.[1,4,10]

Results of the present study showed that 25% of patients with an ETT and ventilator had ventilator-associated pneumonia (VAP). This can occur due to several factors, including the placement of a ventilator for more than 3 days and decreased consciousness of the patients that reduce the cough reflex and secretion discharge. Additionally, the use of a catheter section not complying with aseptic techniques leads to an increase in the incidence of VAP. Results of identification of bacterial growth indicated that all of the bacteria found were gram-negative, including *Pseudomonas aeuginosa, Staphylococcus epidermidis, stapilococcus aureus, Acinetobacter baumami* (94.11%), and *Enterobacter gergoviae* (93.93%). Therefore, clinicians shall identify the bacteria first and then determine the appropriate antibiotics to be administered.

CONCLUSIONS

1. Twenty-five percent 25% of patients with a ventilator and endotracheal tube (ETT) have a risk of ventilator-associated pneumonia (VAP).
2. The signs of VAP include an increase in body temperature, an increase in leukocyte count, decreased PAO_2 levels and shortness of breath due to the buildup of secretions.
3. Results of identification of bacterial growth in patients with an ETT showed 5 bacterial colonies: *Pseudomonas aeuginosa*, *Staphylococcus epidermidis*, *stapilococcusaureus*, *Acinetobacter baumami*, *and Enterobacter gergoviae*.
4. The bacteria identified as causing VAP were gram-negative.
5. Microbate system examination of the gram-negative bacteria showed that they contained lysine, omithine, glukose, xylose and citrate.

REFERENCES

1. Dally Rahman, Emil Huriani EJ. Kejadian Ventilator Associated Pneumonia (Vap) Pada Klien Dengan Ventilasi Mekanik Menggunakan Indikator Clinical Pulmonary Infection Score (CPIS). *J Ners*. 2011;6(2):126-135.
2. Kalanuria AA, Zai W, Mirski M. Ventilator-associated pneumonia in the ICU. *Crit Care*. 2014;18(2):1-8.
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4. Wiryana M. Ventilator Associated Pneumonia. *J Peny Dalam,*. 2007;8(3):254-268.
5. Huriani E. Pengaruh Mobilisasi Dan Fisioterapi Dada Terhadap Kejadian Ventilator Associated Pneumonia Di Unit Perawatan Intensif. *Ners J Keperawatan*. 2011;7(2):121-129.

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