

Assessing Risk Factors of Pneumonia among Adults at Ibn-Sina in Mosul City.

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الخلاصة

الهدف: تهدف هذه الدراسة إلى تقييم عوامل الخطورة الأكثر شيوعاً والتي تسبب مرض ذات الرئة عند البالغين.
المنهجية: هذه الدراسة تم إجرائها في مستشفى ابن سينا التعليمي (وحدة العناية المركزة) وكذلك مرضى العيادة الخارجية في نفس المستشفى المذكور آنفاً. تم جمع العينات خلال الفترة المحصورة بين (١ تشرين الثاني ٢٠٠٧ ولغاية الأول من شباط ٢٠٠٧). إن عينة البحث بلغت (٦٥) مريضاً مصاباً بذات الرئة، وكانت إصابتهم لأسباب مختلفة وكانوا من المراجعين لمستشفى ابن سينا التعليمي لدعوى العمر المتراوح بين (٥٩-٨٦) سنة حقق أعلى مستوى بين المرضى ويعتبر العامل الأكثر شيوعاً للإصابة بذات الرئة.
النتائج: كانت نتيجة الدراسة هي أن معظم حالات ذات الرئة المكتسب من المستشفى كان سببه هو العدوى خلال دخول المرضى إلى المستشفى بينما كان مرضى ذات الرئة المكتسب من المجتمع يعانون من صعوبة في البلع وسوء نظافة الفم والتدخين.
التوصيات: توصي هذه الدراسة بإعطاء لقاح ذات الرئة للبالغين الذين هم ذات خطورة عالية لذات الرئة ويجب إعادة تلقيحهم مرة ثانية كل (٦ اشهر).

Abstract

Objectives: the aim of the study to assess the most common risk factors of pneumonia at adult and find the socio-demographic characteristics of sample.

Methodology: the study performed at Ibn-Sina teaching hospital (intensive care unit) and out patient in the same hospital period of (15th) November (2006) till (1st) February (2007). The sample of the study includes (65) patients with pneumonia for different underlying causes who were attending Ibn-Sina teaching hospital age range (59-68) years is the highest level and is the most common risk factor for pneumonia.

Results: the results of the study most patients' hospital acquired-pneumonia from contamination during administration to hospital but community acquired-pneumonia were difficult in swelling, bad cleaning of mouth and smoking.

Recommendations: This study recommends providing pneumococcal pneumonia vaccine for adult those at risk for serious pneumonia and should be revaccinated every six years.

Key Words: Pneumonia. Risk Factors

Introduction

Pneumonia is inflammation of the lung parenchyma that caused by an infectious agent that lead to alveolar consolidation (7, 10). Pneumonia is the 6th most common cause pneumonia in the united state and the most common cause of death due to infectious disease (1). Pneumonia most commonly to an infection of the lungs that causes inflammation in the lung tissue, and fluid in or around the air sacs of the lungs (1). Pneumonia can be classified as community -acquired or hospital acquired (6). Smoke, or abuse alcohol, millions of microscopic hairs (cilia) cover the surface of the cells lining bronchia tubes. Hairs beat in a wave-like fashion to clear air ways of normal secretion, but irritants such as tobacco smoke paralyze the cilia, causing secretions to accumulate, if these secretions contain bacteria, they develop into pneumonia. Alcohol interferes with normal gag reflex as well as with the action of the white blood cells that fight infection. Pneumonia is the most common acquired infection among people in hospital intensive care units. People who require mechanical ventilation are particularly at risk because the breathing tube (end tracheal tube) bypasses the normal defenses of the respiratory tract, prevent coughing and can harbor bacteria and other harmful organisms (13) are exposed to certain chemicals or pollutants. Your risk of developing some uncommon types of pneumonia increases if you work in agriculture, construction or around certain industrial chemicals or animals' exposure to air pollution or toxic fumes can also contribute to lung inflammation.

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Risk Factors of Pneumonia among Adults

Methodology: A descriptive design was carried out from the period (15th) November (2006) till the (1) February' (2007). The study was carried-out in intensive care unit and out-patients of Ibn-Sina hospital in Mosul city'. The sample of the study consist of (65) patient with pneumonia for different reasons it is divided into two groups (38) patient from out patient and (27) in-patients from intensive care unit.

Data were collection by using a questionnaire depending on the review of related literature and information obtained from patient With pneumonia. Reliability was determined through the use of internal consistency and calculation of cronbach's alpha correlation coefficient (0.86). Validity was determined through panel of experts. To complete the questionnaire, the interviewer explained to every patient the questionnaire and gave assessment for any difficult question, while those who can not read and write, the interviewer the self filled the questionnaire according to their original responses. In present study for testing validity 01 questionnaire based on the agreement of experts composed of (10) experts in different field (physician, psychiatrist, nurse, psychologist, statistician).

Results

Table (1) Demographic Characteristics of the sample (n=68).

Factors	Groups	f	0/
Age	18-28 years	16	24.61
	29-38years	10	15.4
	39--18 years	6	9.231
	49-58 years	6	9.231
	59-68 years	18	27.28
	69-78 years	9	14
Sex	Male	34	58
	Female	31	42
Marital statues	Single	27	41.5
	.Married	38	58.5
Educational levels	Illiterate	24	36.9
	Primary	17	26.15
	Secondary	5	7.70
	Institute	7	10.76
	University	12	18.46
Occupation	House w ife	16	24.6
	Private	16	24.6
	Employed	20	36.8
	Pupil	13	20
Residence	Urban	35	54
	Rural	30	46

f= frequency, %= percentage.

In relation to age distribution of the high risk pneumonia patient has a wide range between (59-68) years of age. In relation to sex, 34 (58%) were male, while 31 (42%) were females. In regard to marital status, the majority of these patients were married and they accounted for 38 (58.5%). In regard to education level, most of the patients were illiterate 24 (36.9%). Concerning to occupation, 20 (36.8%) of patients were employed while (20%) of them were pupil.

In regard to residential area, the most of patients were living in the urban area 35 (54%).

Table (2). Duration of patients' exposure to pneumonia.

Exposure to pneumonia	f	%
Less than month	18	27.38
1-3	29	44.60
3-6	1	1.4
6-9	1	1.4
9-12	11	16.8
12---- above	5	7.83

This table shows that the highest percentage (1-3) months duration were (44.60%) of patients were exposed to pneumonia.

Table (3) Distribution of number of person in the family in the studied sample.

Number of person in family	f	0/
1-5	3	4.2
6-10	37	57
11-15	20	30.8
16-20	5	8

This table shows that (57%) of the family have between (6-10) person, while 3 (4.2%) have (1-5) as a low percentage.

Table (4) Distribution of hospital-acquired pneumonia risk factors.

Hospital-acquired pneumonia	Yes		NO	
	f	%	f	0
Opening in the tracheal tube	16	24.6	49	75.4
Nasogastric tube	22	33.84	43	66.16
Post operative of upper part of abdominal or thorax such as splenectomy	15	23	50	77
Contamination during admission in the hospital	25	38.5	40	61.5

It shows that most of the patient hospital-acquired pneumonia 38.5% was from contamination during admission to the hospital.

Risk Factors 01 Pneumonia among Adults

Table (ε) Distribution of community-acquired pneumonia risk factors.

Community acquired pneumonia	Yes		No	
	f	%	f	%
Chronic disease such as cancer, diabetic, heart disease, renal disease, liver disease	39	60	26	40
Difficult in swallowing	50	76.5	15	23.5
Exposure to toxic gases	3	4.6	62	95.4
Influenza	23	35	42	65
Bed rudder for long time	18	27.38	47	72.62
Smoking	45	69.2	20	30.8
Addiction on alcohol drinking	3	4.62	62	95.4
Bad cleaning of mouth	49	75.4	16	24.6
Malnutrition	59	90.77	6	9.23
The person who working research laboratory	0	0	65	100
History of allergic diseases	16	24.6	49	75.4

It appears that the majority risk factor of community-acquired pneumonia, were difficult in swallowing, malnutrition, bad cleaning of mouth and smoking

Discussion

Pneumonia can occur in any season but is most common during winter and early spring. Person of all ages are susceptible, but Pneumonia is more common among infants and older adults. The present study shows that the highest percent of age risk factors for Pneumonia were (27.28%) year people age (65) and over also in highest risk group for pneumococci pneumonia (Table 1). Certain individuals, such as the elderly, the very young, and with chronic or severe medical conditions, are of course at higher risk. The elderly are (60) percent more likely to be affected than the general population (3) Male in more than female but there is no any mention between male and female occurring (58.5%) 01 present study are married. Patient in the studied groups were variable and mostly illiterate who require more nursing efforts. On the other hand most of the patients were employed with their disease which represent on achievement for coping with life on personal and nursing care levels. Recruit on military bases and college students are at risk higher than average risk for mycoplasma pneumonia. Exposure to infection the highest in the study (44.60%) between (1-3) months, people who are hospitalized have a higher risk for developing pneumonia than those who are not (table 2). Other category of pneumonia, designated "health care associated pneumonia" is acquired in other health care facilities such as nursing homes, dialysis centers and out patient (1). Pneumonia is more likely to occur in people whose immune system is weakened by existing illness, such as the flu cancer or AIDS, and in people with chronic conditions (2).

Number of persons in family it appears (57%) were between (6-10) persons which affected health in one home. The risk of pneumonia is increased among people living in crowded condition such as student in dormitories, patients living in institutions, and military personnel in barracks. The present study found that (38.5%) of studied group were acquired-pneumonia from contamination during administration hospital (table 3, 4).

The majority of cases of hospital acquired-pneumonia out side of intensive care units (Table 4). However, the highest risk in patients on mechanical ventilation. In addition, as one-quarter of intensive care unit patients develop pneumonia (8). The people who smoke and second-hand smoke who exposed to smoking are at higher risk of developing pneumonia. Organisms that cause pneumonia may directly inhaled from the environment (Table 5). They can also more into lungs from areas around the month and in the throat, where they normally thrive without causing any harm. Infections from other area of the body also more into lungs and cause pneumonia (15).

- 1- Older adults are the highest risk factor to pneumonia.
- 2- The highest level of education of the sample was illiterate.
- 3- The highest factors of hospital-acquired pneumonia is contamination during admission to hospital, white community- acquired pneumonia is malnutrition, difficult in swallowing and bad cleaning of mouth.

Recommendation

- 1- Adult people must take vaccination which is protective against pneumococcal bacteremia.
- 2- Health education by mass media about risk factors of pneumonia.
- 3- Smoking cessation program.
- 4- Education program to take care about respiratory system.
- 5- Further studies should be done on large sample.
- 6- Presenting then with scientific booklet on health education about pneumonia.

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Appendices

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							عدد أفراد الأسرة	7

عوامل الخطورة لمرضى ذات الرئة

- أ. عوامل خطورة بسبب اكتساب المرض من المستشفى
- 1- وجود فتحة في القصبة الخوانية .
 - 2- وجود أنبوب أنفي معوي .
 - 3- بعد العمليات الجراحية في القسم العلوي من البطن أو الصدر مثل رفع الطحال .
 - 4- تلوث خلال وجود المريض الراقد في المستشفى.
- ب- عوامل خطورة بسبب اكتساب المرض من المجتمع
- 1- أمراض مزمنة مثل السرطان. السكري. امراض القلب. أمراض الكلية. أمراض الكبد.
 - 2- صعوبة في البلع.
 - 3- التعرض إلى غازات سامة.
 - 4- الإصابة بالانفلونزا.
 - 5- رقاد المريض لفترة طويلة في الفراش.
 - 6- التدخين.
 - 7- ناسج الكحول.
 - 8- سوء نظافة الفم.
 - 9- سوء التغذية.
 - 10- العمل في مختبرات البحوث العلمية.
 - 11- تاريخ مرضي بأمراض الحساسية.