

“A Study to Assess the Risk of Gastroesophageal Reflux Disease Induced Asthma among Patients Visiting Medical OPD, Surgical OPD and Pulmonary OPD in Smvmch at Puducherry”

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ABSTRACT

GERD can trigger asthma symptoms. GERD is more common in people with asthma than in the general population. Individuals whose asthma is especially hard to treat appear to be more prone to GERD than other affected persons. Lifestyle and home remedies are helps to reduce the symptoms of GERD induced asthma. Because certain medications can be ineffective in treating GERD and asthma simultaneously, the best treatment for these conditions may consist of lifestyle and home remedies. To controlling GERD symptoms. In this paper, we discuss knowledge regarding risk of GERD induced asthma among patients and maximize the health outcomes of patients. The main study was conducted at SMVMCH, Puducherry. The period of data collection was 1 week, and the data were collected from the 50 OPD patients by using knowledge questionnaires. Purposive sampling technique was used. Majority of the patients 23(46%) had inadequate level of knowledge, 18(36%) had moderate and 9(18%) had adequate level of knowledge. The mean and standard deviation of level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients visiting medical OPD, surgical OPD and pulmonary OPD in SMVMCH at Puducherry is (13.02+6.65) respectively. The study shows that, majority of the patients having inadequate level of knowledge regarding risk of gastroesophageal reflux disease induced asthma.

KEYWORDS: GERD, Asthma, Risk of GERD induced asthma, OPD patients .

I. INTRODUCTION

Gastroesophageal reflux disease (GERD) or gastro-oesophageal reflux disease (GORD) is a chronic condition in which stomach contents and acid rise up into the esophagus, resulting in symptoms and complication. Asthma is a disease of increased responsiveness of the airways to various stimuli including allergens and irritants that cause obstruction of the airways.

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The association between gastroesophageal reflux disease (GERD) and asthma is well accepted. The prevalence of GERD increases in asthmatics compared with normal controls, whereas GERD may induce or exacerbate asthma. They interact with each other in a cause and effect relationship. But the mechanism by which GERD might induce or aggravate asthmatic symptoms remains unclear.

Actually cause of gastroesophageal reflux disease are often unknown; however, physicians do know that a variety of factors can increase your risk for developing this problem. These factors include, Excessive use of alcohol, obesity, pregnancy, smoking, hiatal hernia (in which part of the stomach rises into the chest).

GERD can trigger asthma symptoms. GERD is more common in people with asthma than in the general population. Individuals whose asthma is especially hard to treat appear to be more prone to GERD than other affected persons. Generally speaking, reflux may cause asthma symptoms in two ways. The stomach acid that leaks back into the esophagus creates a chain reaction leading to asthma symptoms.

Treatments to help manage GERD include, Avoiding eating 2-3 hours before sleeping, raising the head of the bed by 6-8 inches to elevate the upper body, as just raising the head with extra pillows is not effective, eating smaller meals and limiting large, heavy meals, particularly before sleeping, maintaining a healthy weight, avoiding smoking, dietary changes may also help, and people may need to avoid: acidic foods, such as citrus fruits, fried foods, fatty foods, spicy foods, chocolate, caffeine, mint, alcohol. Lifestyle and home remedies are helps to reduce the symptoms of gerd induced asthma.

AIM OF THE STUDY

The aim of the study was to assess the level of knowledge regarding risk of gastroesophageal reflux disease induced asthma.

STATEMENT OF THE PROBLEM:

A STUDY TO ASSESS THE RISK OF GASTROESOPHAGEAL REFLUX DISEASE INDUCED ASTHMA AMONG PATIENTS VISITING MEDICAL OPD, SURGICAL OPD AND PULMONARY OPD IN SMVMCH AT PUDUCHERRY.

OBJECTIVE

- ❖ To assess the level of knowledge regarding risk of gastroesophageal reflux disease induced asthma among patients visiting medical OPD, Surgical OPD and pulmonary OPD.
- ❖ To associate the level of knowledge regarding risk of gastroesophageal reflux disease induced asthma among patients with their selected demographic variables.

ASSUMPTION:

- ❖ The tool prepared for the study will be sufficient for collecting information on risk of gastroesophageal reflux disease induced asthma among patients
- ❖ There may be decreased knowledge of patients regarding the risk of gastroesophageal reflux disease induced asthma

II. REVIEW OF LITERATURE:

Fatimah Dallak et al (2022) was conducted study based on prevalence and risk factors of gastroesophageal reflux among jazan university students, Saudi Arabia: A cross sectional study this is a descriptive and analytical cross sectional study that was conducted among jazan university students in jazan province, Saudi Arabia. Data was collected using a self administered questionnaire and analysis was performed using SPSS (IBM Corp., Armonk, NY). A total of 953 students participated in this study. The prevalence of GERD was found to be 23.1% our findings showed that five or more physical activities for >30 minutes per week, and fiber-rich foods were found to decrease the odds of developing GERD. However more than three meals per day and having a family history of GERD were found to increase the odds of GERD. Moreover, age, use of proton pump inhibitors (PPI) and khat chewing were also statistically significant risk factors for GERD ($p < 0.05$).

Bical Jamal Kamal et al (2022) was conducted a study based on gastroesophageal reflux disease in asthma. A community based cross sectional study using structured questions, 300 asthmatic patient were asked questions regarding their asthma histone both type II asthma and I and whether they are complaining from gastroesophageal reflux (GERD) or not body mass index (BMI) of the patients has been assessed to find a relation with GERD the study show a sign and relationship between GERD and asthma especially type I also GERD was more common in weight and obese asthmatic patients. As GERD can asthma symptoms this study is conducted to assess the association between GERD and asthma especially type I and this finding again with studies published before there is significant relationship between GERD and asthma.

METHODOLOGY

The research approach used for this study was quantitative research approach. A descriptive research design was used to assess the risk of gastroesophageal reflux disease induced asthma among patients visiting medical OPD, Surgical OPD and pulmonary OPD at SMVMCH, Puducherry. By using purposive sampling technique 50 sample was selected for the present study. The tool consists of demographic data and questionnaire.

DESCRIPTION OF TOOL:

The tool used for this study consists of 2 sections namely.

SECTION A: Socio demographic Variables: Age, gender, Religion, educational Status, occupational Status, marital Status, dietary habits, bad habits.

SECTION B: Multiple choice questionnaire regarding risk of gastroesophageal reflux disease induced asthma among patients visiting medical Surgical and pulmonary OPD at SMVMCH, Puducherry.

In this study was knowledge questionnaire used, consists of 30 items.

SCORING INTERPRETATION:

LEVEL OF KNOWLEDGE	SCORING	PERCENTAGE
Inadequate knowledge	0-10	23(46%)
Moderate knowledge	11-20	18(36 %)
Adequate knowledge	21-30	9(18%)

RESEARCH DESIGN:

A descriptive Research Design was adapted for this study.

RESEARCH SETTING:

The study will be conducted at Sri Manakula Vinayagar Medical College and Hospital, a It consist of 1050-bedded hospital in Puducherry. The population of the study patients who visiting medical OPD, Surgical OPD and pulmonary OPD at SMVMCH, Puducherry. sample size is the number of subjects involved in the study. sample size consist of 50 OPD patients. Sampling refers to the process of selecting a portion of the population to represent the entire population. Sampling technique chosen was purposive sampling..

RESEARCH APPROACH:

A quantitative research approach was adapted for this study.

POPULATION:

The population for this study comprises of the risk of GERD induced asthma patients visiting medical OPD, Surgical OPD and pulmonary OPD at SMVMCH, puducherry.

SAMPLE:

The study samples consist of all the risk of GERD induced asthma patients visiting Medical OPD, Surgical OPD and pulmonary OPD at SMVMCH, puducherry who fulfill the inclusion criteria.

SAMPLE SIZE:

Sample size consists of 30 patients visiting medical OPD, Surgical OPD and pulmonary OPD at SMVMCH, puducherry

SAMPLING TECHNIQUE:

In this study a purposive sampling technique were used for selecting the samples.

SAMPLE SELECTION CRITERIA:.

Inclusion criteria:

- Patients who are all having gastroesophageal reflux disease
- Patients who having asthma
- Patients who willing to participate in the study.

Exclusion criteria:.

- Patients not willing to participate in the study.
- Patients who having diseases other than GERD and asthma

DATA COLLECTION PROCEDURE

The data collection done with the permission to conduct the study was obtained from authorities of the concerned person Sri Manakula Vinayagar Medical college and Hospital , Puducherry. 50 OPD patients were selected by using convenience sampling techniques and according to the inclusion and exclusion criteria and after introducing and explain the purpose of the study. The tool consists of demographic variables and knowledge questions were administered to respondents and data was collected.

III. RESULTS:

• The findings shows that Majority of the patients 23(46%) had inadequate level of knowledge, 18(36%) had moderate and 9(18%) had adequate level of knowledge. The mean and standard deviation of level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients visiting medical surgical and pulmonary OPD in SMVMCH at Puducherry is (13.02+6.65) respectively.

• Out of the 50 patients who were interviewed, Majority of the patients 13(26%) of study population were in the age group are 30-40 and 40-50 years. Majority of the patients were male 29(58%). Majority of the patients were Hindu 28(56%). Majority of the patients were Primary school 17(34%). Majority of the patients were Private Job 30(60%). Majority of the patients were married 29(58%). Majority of the patients were

Nuclear family 32(64%). Majority of the patients were having one child 18(36%). Majority of the patients were Rural 30(60%). Majority of the patients had not previous history of asthma 30(60%).

Frequency and percentage wise distribution of demographic variables among patients.

• (N=50)
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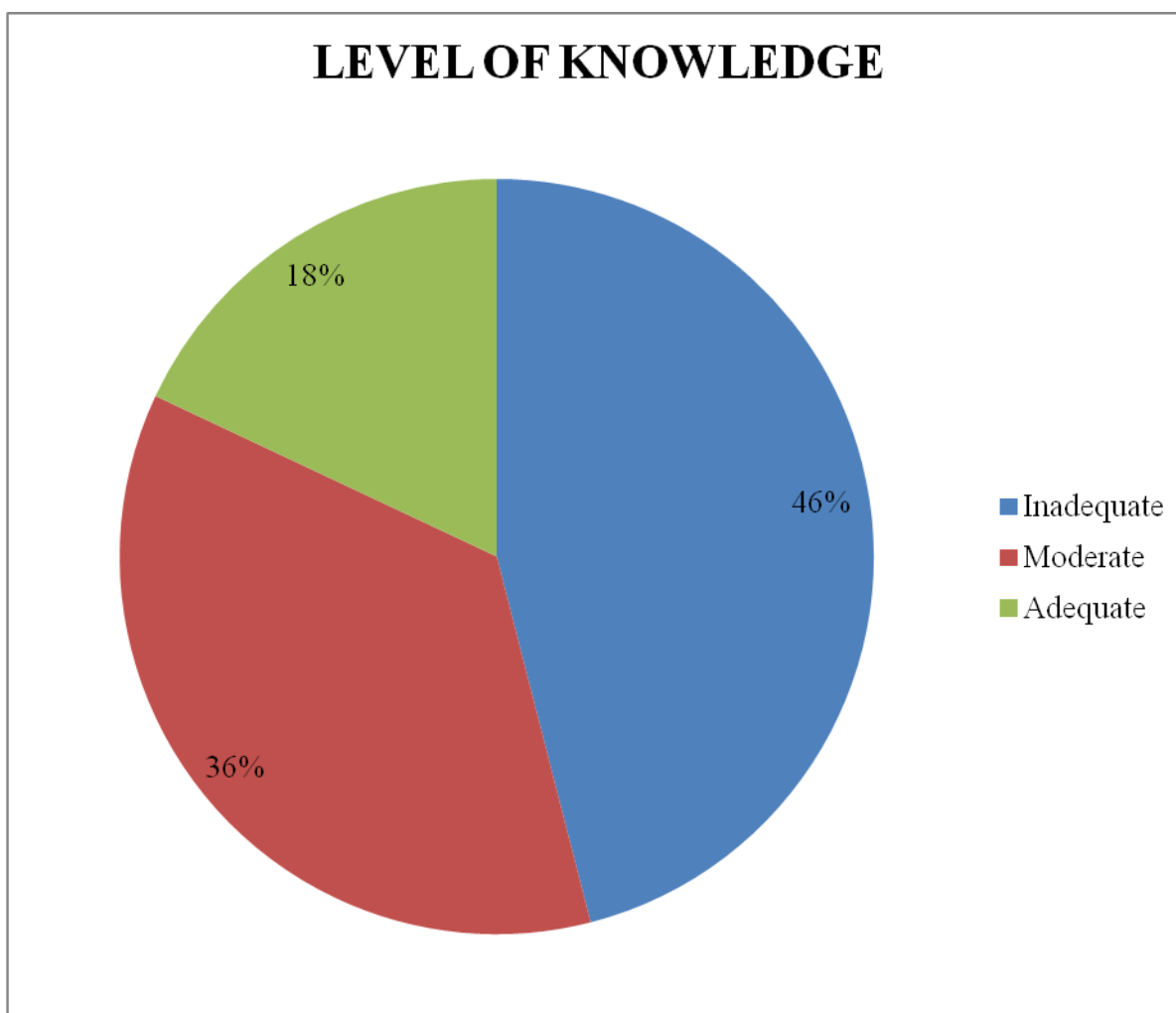
SL. NO	DEMOGRAPHIC VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
1	Age		
	A) 20-30 years	12	24
	B) 30-40 years	13	26
	C) 40-50 years	13	26
	D) >50 years	12	24
2	Sex		
	A) Male	29	58
	B) Female	21	42
	C) Transgender	0	0
3	Religion		
	A) Hindu	28	56
	B) Muslim	11	22
	C) Christian	11	22
	D) Others	0	0
4	Education		
	A) Illiterate	13	26
	B) Primary school	17	34
	C) Secondary school	8	16
	D) Graduated	12	24
5	Job type		
	A) Government job	2	4
	B) Private job	30	60
	C) Own business	17	34
	D) Unemployed	1	2
6	Marital status		
	A) Unmarried	15	30
	B) Married	29	58
	C) Divorced	6	12
7	Type of family		
	A) Nuclear	32	64
	B) Joined family	13	26
	C) Single	5	10
8	Having children		
	A) One children	18	36
	B) Two children	15	30
	C) 2 or more children	2	4
	D) No children	15	30
9	Type of Residence		
	A) Rural	30	60
	B) Urban	20	40

10	Previous history of asthma		
	A) Yes	20	40
	B) No	30	60

Frequency and percentage wise distribution of level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients visiting medical OPD, surgical OPD and pulmonary OPD in SMVMCH at Puducherry.

(N = 50)

LEVEL OF KNOWLEDGE	FREQUENCY (n)	PERCENTAGE (%)
Inadequate	23	46
Moderate	18	36
Adequate	9	18
Total	50	100
Mean±Standard deviation	13.02±6.65	



Association between the level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients with their selected demographic variables.

(N=50)

SL. NO	DEMOGRAPHIC VARIABLES	LEVEL OF KNOWLEDGE						Chi-square X ² and P-Value
		INADEQUATE		MODERATE		ADEQUATE		
		N	%	N	%	N	%	
1	Age							X ² =6.51 Df=6 p =0.368 NS
	A) 20-30 years	4	17.4	4	22.2	4	44.4	
	B) 30-40 years	6	26.1	4	22.2	3	33.3	
	C) 40-50 years	5	21.7	7	38.9	1	11.1	
	D) >50 years	8	34.8	3	16.7	1	11.1	
2	Sex							X ² =2.49 Df=2 p =0.287 NS
	A) Male	11	47.8	13	72.2	5	55.6	
	B) Female	12	52.2	5	27.8	4	44.4	
	C) Transgender	0	0	0	0	0	0	
3	Religion							X ² =2.51 Df=4 p =0.643 NS
	A) Hindu	14	60.9	9	50	5	55.6	
	B) Muslim	6	26.1	3	16.7	2	22.2	
	C) Christian	3	13	6	33.3	2	22.2	
	D) Others	0	0	0	0	0	0	
4	Education							X ² =9.26 Df=3 p =0.004 *S
	A) Illiterate	8	34.8	4	22.2	1	11.1	
	B) Primary school	8	34.8	6	33.3	3	33.3	
	C) Secondary school	3	13	4	22.2	1	11.1	
	D) Graduated	4	17.4	4	22.2	4	44.4	
5	Job type							X ² =8.31 Df=6 p =0.216 NS
	A) Government job	0	0	2	11.1	0	0	
	B) Private job	15	65.2	10	55.6	5	55.6	
	C) Own business	8	34.8	6	33.3	3	33.3	
	D) Unemployed	0	0	0	0	1	11.1	
6	Marital status							X ² =8.43 Df=6 p =0.208 NS
	A) Unmarried	7	30.4	7	38.9	1	11.1	
	B) Married	13	56.5	9	50	7	77.8	
	C) Divorced	3	13	2	11.1	1	11.1	
7	Type of family							X ² =5.65 Df=4 p =0.226 NS
	A) Nuclear	15	65.2	13	72.2	4	44.4	
	B) Joined family	4	17.4	5	27.8	4	44.4	
	C) Single	4	17.4	0	0	1	11.1	
8	Having children							X ² =8.85 Df=6 p =0.182 NS
	A) One children	11	47.8	3	16.7	4	44.4	
	B) Two children	4	17.4	8	44.4	3	33.3	
	C) 2 or more children	1	4.3	0	0	1	11.1	

	D) No children	7	30.4	7	38.9	1	11.1	
9	Type of Residence							$\chi^2=4.92$ Df=2 $p =0.045$ *S
	A) Rural	10	43.5	13	72.2	7	77.8	
	B) Urban	13	56.5	5	27.8	2	22.2	
10	Previous history of asthma							$\chi^2=3.99$ Df=2 $p =0.136$ NS
	A) Yes	10	43.5	9	50	1	11.1	
	B) No	13	56.5	9	50	8	88.9	

*- $p < 0.05$ significant, *- $p < 0.001$ highly significant, NS-Non significant

IV. CONCLUSION AND RECOMMENDATIONS:

CONCLUSION :

A study to assess the risk of gastroesophageal reflux disease induced asthma among patients visiting medical OPD Surgical OPD and pulmonary OPD at SMVMCH, puducherry. The findings of the study revealed that Out of 50 samples, Majority of the patients 23(46%) had inadequate level of knowledge, 18(36%) had moderate and 9(18%) had adequate level of knowledge. The mean and standard deviation of level of knowledge regarding risk of gastroesophageal reflux disease induced Asthma among patients visiting medical OPD, surgical OPD and pulmonary OPD in SMVMCH at Puducherry is (13.02+6.65) respectively.

NURSING IMPLICATIONS:

The study had implications for nursing practice, nursing education, nursing administration and nursing research.

NURSING PRACTICE:

The staff nurses must have some knowledge about gastroesophageal reflux disease induced asthma and take a care about high risk populations.

NURSING EDUCATION:

The nurse educated the clients about the gastroesophageal reflux disease in the hospital settings and handling of high risk clients. Provide a necessary health education, provide a activity therapy or routine works etc.,

NURSING RESEARCH:

Numbers of studies are being conducted to assess the risk of gastroesophageal reflux disease induced asthma among patients visiting medical OPD, Surgical OPD and pulmonary OPD at SMVMCH . Patients are mostly inadequate in knowledge. Different studies have to be conducted further prevalence rate of GERD induced asthma among high risk population.

NURSING ADMINISTRATION:

Nurse’s administrators can make necessary steps to spread awareness about gastroesophageal reflux disease induced asthma. Nurse’s administration can organize awareness program or some participation events about GERD induced asthma at SMVMCH.

RECOMMENDATIONS:

- A similar study can be conducted by large number of sample in future.
- The study was conducted to particular group of people at particular age.
- A prospective study can also be conducted
- Study based on daily life of clients to do their daily task.

BIBLIOGRAPHY:

BOOK REFERENCE:

- [1]. Basavanthappa BT.Nursing Research, New Delhi; Jaypee Brothers Medical Publishers(p)Ltd.
- [2]. Brunner and Suddarth ,”Textbook of Medical Surgical “,12th edition wolters kluwers pvt ltd , New Delhi. Pg No: 1247-1249
- [3]. Lewis, Colier, Hettkemper, Dirksen. Medical Surgical Nursing .6th ed. Mosby Publication.
- [4]. Joyce M Black Esther Mataserin Jacob. Medical Surgical Nursing .Clinical Management for Continuity of care. 5thed. New Delhi: Harcourt Brace and company.
- [5]. Suresh K Sharma ,Nursing Research and Statistics, Published by Elsevier, A Division Of Reed Elsevier India Private Limited.
- [6]. Abdellah,G.Faye, Eugene Levene, Better Patient Care Through Nursing Research London: The Mac Million Publishing Company.
- [7]. American Holistic Nurses Association. Position on the role of Nurses in the Practice of Complementary and Alternative Therapies.
- [8]. Kothari CR ,Research methodology-methods and techniques.2nd edition New.
- [9]. Burns Nancy, Grove k Susane The Practice of Nursing Research-Conduct, Critique and Utilization,2nded.Philadelphia (us);WB Saunders Company.
- [10]. Luckmann and Sorensons. Medical Surgical Nursing.4thed. Philadelphia: W.B Sounders Company; 1997.

- [11]. Polit FD, Beck CT. Nursing Research: Generating and Assessing Evidence for Nursing Practice. 8th ed. Philadelphia: Lippincott, Williams and Wilkins Publications; 2004.
- [12]. Lippon Cott (1998) Manual of Nursing Practices 8th edition, Ed.Lippincott, Williams & Wilkins, publications, US.
- [13]. Marlow , Textbook of paediatric nursing, 6th edition 2006, saurabh printed pvt.Ltd, Nodia
- [14]. Wong's, Essentials of paediatric nursing, 8th edition,2009, Elsevier, first floor ,Nodia.
- [15]. Parul dutta, A textbook of paediatric nursing, 2nd edition 2009, jaypee brothers medical Publications, Pvt.Ltd, New Delhi.

JOURNAL REFERENCE

- [16]. Simpson WG. Gastroesophageal reflux disease and asthma. Diagnosis and management. Arch Intern Med 1995; 155:798.
- [17]. Chipps BE, Haselkorn T, Paknis B, et al. More than a decade follow-up in patients with severe or difficult-to-treat asthma: The Epidemiology and Natural History of Asthma: Outcomes and Treatment Regimens (TENOR) II. J Allergy Clin Immunol 2018; 141:1590.
- [18]. Naik RD, Vaezi MF. Extra-esophageal gastroesophageal reflux disease and asthma: understanding this interplay. Expert Rev Gastroenterol Hepatol 2015; 9:969.
- [19]. Nordenstedt H, Nilsson M, Johansson S, et al. The relation between gastroesophageal reflux and respiratory symptoms in a population-based study: the Nord-Trøndelag health survey. Chest 2006; 129:1051.
- [20]. Hassall E. Outcomes of fundoplication: causes for concern, newer options. Arch Dis Child. 2005;90:1047–1052. [Crossref], [PubMed], [Web of Science], [Google Scholar]
- [21]. Parekh PJ, Johnson DA (2015) Medical treatment versus surgery for treatment of gastroesophageal reflux disease. Tech Gastrointest Endosc 17:53–61. doi:10.1016/j.tgie.2015.02.003
- [22]. Paoletti G, Melone G, Ferri S, et al. Gastroesophageal reflux and asthma: when, how, and why. Curr Opin Allergy Clin Immunol 2021; 21:52.
- [23]. Katz PO, Gerson LB, Vela MF. Guidelines for the diagnosis and management of gastroesophageal reflux disease. Am J Gastroenterol 2013; 108:308.
- [24]. Kiljander TO, Laitinen JO. The prevalence of gastroesophageal reflux disease in adult asthmatics. Chest 2004; 126:1490.
- [25]. Field SK, Underwood M, Brant R, Cowie RL. Prevalence of gastroesophageal reflux symptoms in asthma. Chest 1996; 109:316.

NET REFERENCE

- [26]. [www. Wikipedia. com](http://www.Wikipedia.com)
- [27]. [www. medscape.com](http://www.medscape.com)
- [28]. [www. ncbi.nlm.gov/pubmed.com](http://www.ncbi.nlm.gov/pubmed.com)
- [29]. [www. surgicalcriticalcare.net](http://www.surgicalcriticalcare.net)
- [30]. www.emro.who.com