Volume : 5 | Issue : 8 | August 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Original Research Paper

Level of Awareness Regarding Early Sign and Symptoms of Myocardial Infarction in Hypertensive Patients: A Major Cause of Pre Hospital Delay in Patients with AMI

Nursing

KEYWORDS : Early sign and symptoms of myocardial infarction, Myocardial Infarction, Hypertension

Mandeep Kaur — Lecturer , Swami Prema Nand College of Nursing, GT Road, Mukerian, Punjab (144211)

Dr. (Mrs.) Parampal Kaur — Professor & Principal, Swami PremaNand College of Nursing, GT Road, Mukerian, Punjab (144211)

ABSTRACT

Background: *The burden of the chronic non-communicable diseases, especially heart disease and hypertension is rising in the low and the middle-income countries, particularly in Asia.1 But majority of the population with hypertension does not have sufficient knowledge regarding early sign and symptoms of myocardial infarction (MI) as the sign and symptoms appear in a confusing way hence causes delay in seeking treatment.2* **Objective:** *Assess the level of awareness regarding early sign and symptoms of myocardial infarction among hypertensive patients.* **Methods:** *A present study is conducted by using descriptive research design. Through purposive sampling, 60 subjects were selected. Data was collected with interview method by using self structured knowledge questionnaire. Collected data was analyzed by using descriptive and inferential statistics.* **Results:** *None of subject had excellent level of knowledge followed by 31.67% had good level of knowledge, 65% had average and 3.33% had below average knowledge regarding early sign and symptoms of myocardial infarction. Typical symptoms of MI i.e chest pain was recognized by 83.3% subjects, followed by difficulty in breathing (68.3%), radiation of chest pain to neck and shoulders (45%), jaw pain (58.33%), sweating (65%) and dizziness & double vision (51.66%). Calculated mean score for typical symptom was 32.25 (SD=11.64). Atypical symptoms were mentioned by few respondents and calculated mean score was 27.77 (SD=10.53).* **Conclusion:** *The study demonstrated lack of knowledge regarding early sign and symptoms of MI among the hypertensive patients.*

INTRODUCTION

High blood pressure is a well-established risk factor for acute myocardial infarction. It has been observed that risk of myocardial infarction doubles with every 20 mm Hg increase in systolic blood pressure and 10 mm Hg increase in diastolic blood pressure.[3]

Another consequence of hypertension is an increase in vascular resistance which forces the pumping activity of the heart to maintain nutrients and oxygen distribution. Increased work load for the heart leads to the development of myocardial infarction. In India, 32% deaths occur due to myocardial infarction in 2011, and more than 25% of all cardiac patients in the world are Indian.[4]

WHO estimates, 16.7 million people around the globe die of cardiovascular diseases (CVD) each year. India has a non communicable disease death rate of 701-800 per 100,000 populations and out of this around 405 deaths in 100,000 population are contributed by cardio-vascular diseases only. Cardiovascular diseases death rates (per 100,000) is found lower in developed countries such as Canada (120) and Britain (180) and is higher in developing countries such as India (405) & Pakistan (400). India contributed to 85 percent of CVD deaths alone **(World Health Organization, 2012).**[5]

Acute myocardial infarction (AMI) remains unrecognized most of the time because the signs appear in a confusing way. Most of the patients are not aware of the different types of symptoms indicating the presence of acute myocardial infarction (AMI) and this leads to delay in seeking medical advice and hence worsening the situation. Mainly there are two kinds of symptoms which might be associated with cardiac problems. The first type of symptoms is typical which is said to be associated with cardiac problems e.g. numbness and chest pain which may radiate to the neck, jaw, shoulder, back, or left arm and unconsciousness. Chest pain can be severe or mild. It can feel like a tight band around the chest, something heavy sitting on chest, squeezing or heavy pressure. The pain most often lasts longer than 20 minutes. Rest and a medicine to relax the blood vessels may not completely relieve the pain of a heart attack. Symptoms may also go away and come back.[6]

The other type of symptoms are atypical which might be associated with cardiac problems but the public is rarely educated or informed about them hence patients cannot easily think that symptoms can be due to acute myocardial infarction e.g. nausea and vomiting, cough, palpitations, light headedness, epigastric pain, indigestion, shortness of breath, sweating which may be very heavy, fever and even fainting. Some people such as the elderly, people with diabetes, and women may have little or no chest pain or, they may have unusual symptoms such as shortness of breath, fatigue, and weakness.[6]

Many studies suggest that men and women present with different symptoms of myocardial infarction (MI). Women experience a greater diversity of MI symptoms, compared with men. Non chest-pain symptoms occur frequently in women and may be falsely identified as musculoskeletal, gastrointestinal, or emotional in origin and considered inconsistent with cardiac symptoms. Common MI symptoms in women, such as nausea, are less likely to be identified because most women expect that they will have severe chest pain when having an MI. Studies also shows that the average delay for treatment in women is 1 hour longer than for men, which is clinically significant to the outcome. Most women who delay seeking treatment for MI do so because they aren't thinking of a heart attack as an explanation for their symptoms.[7]

METHODOLOGY: A quantitative research approach and a descriptive research design was utilized for the study. The study was conducted in Civil Hospital, Dasuya and Civil Hospital, Mukerian. Through purposive sampling, 60 subjects were selected for OPD and medical ward of the hospital. Written consent was taken from the subjects. Confidentiality and anonymity of the responses were assured. The data was collected by interview method using self structured knowledge questionnaire consisted of two parts, Part 1- Socio demographic data and Part 2- knowledge questionnaire on early sign and symptoms of MI. Total 24 questions were asked from each subject. Collected data was analyzed by using descriptive and inferential statistics.

Volume : 5 | Issue : 8 | August 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

RESULTS:

Table – 1

Percentage Distribution of Hypertensive patients by Sample Characteristics

N= 60

Sr. No	Characteristics	N	%
1.	Gender		
	Male	17	28.33
	Female	43	71.67
2.	Age		
	30 -40	12	20
	41 -50	19	31.67
	51 -60	17	28.33
	> 60	12	20
3.	Level of education		
	Illiterate	1	1.67
	Primary	16	26.67
	Middle	18	30
	Secondary	18	30
	Senior secondary	2	3.33
	Graduate or above	5	8.33
4.	Occupation		
	Homemaker	26	43.33
	Self employed	13	21.67
	Government job	6	10
	Private job	8	13.33
	Laborer	6	10
	Unemployed	1	1.67
5.	Habits		
	Smoking	1	1.67
	Alcoholism	10	16.67
	Both	3	5
	Nil	46	76.67
6.	Life style		
	Active	26	43.33
	Sedentary	11	18.33
	Moderate	23	38.33

Table 1 depicts that majority (71.67%) of the subjects were females. Maximum numbers of subjects (31.67%) were in the age group of 40-50 years of age. Most of the subjects (30%) were educated up to middle school and secondary education. Maximum number of the subjects (43.33%) was homemaker. Most of the subjects (76.67%) were nonalcoholic and non smoker. Regarding life style maximum number of subjects (43.33%) had active life style.

Table -2

Frequency & percentage distribution of hypertensive patients according to level of knowledge

N=60

Level of Knowledge	Score	Hypertensive patients n	%
Excellent	19-24	0	0
Good	13-18	19	31.67
Average	7-12	39	65
Below Average	0-6	2	3.33

Maximum Score =24

Minimum Score=0

Table-2 depicts that none of subject had excellent level of knowledge, 19 subjects (31.67%) had good level of knowledge, 39 subjects (65%) had average level of knowledge and 2 subjects (3.33%) had below average knowledge.

Thus, it can be concluded that majority of the hypertensive patients had average knowledge regarding early sign and symptoms of myocardial infarction.

Table-3

Mean, standard deviation and mean percentage of knowledge scores of hypertensive patients regarding early sign and symptoms of myocardial infarction

N=60

Mean knowledge score	Median	SD	Mean Percentage
11.19	11	2.425	46.58%

Maximum Score =24

Minimum Score=0

Table-3 shows that mean knowledge score of subjects were 11.19 and SD was 2.424. The mean percentage of knowledge score was 46.58%. Thus, it can be concluded that hypertensive patients had average knowledge regarding early sign and symptoms of myocardial infarction.

Figure 1: Comparison of mean knowledge scores regarding typical and atypical symptoms of MI among hypertensive patients

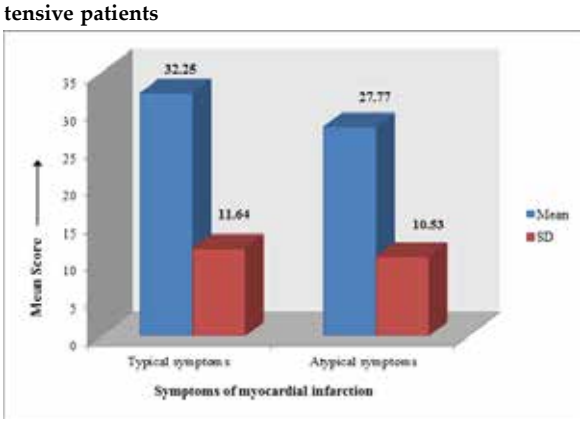

Figure 1 show that hypertensive patients had better knowledge (Mean-32.25 & SD-11.64) regarding typical symptoms of myocardial infarction than the atypical symptoms (Mean-27.77 & SD-10.53) of myocardial infarction.

Figure 2: Percentage of respondents according to specific symptoms

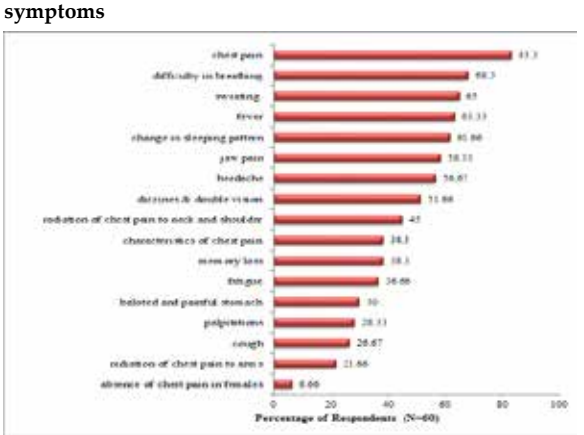

Figure 2 reveals the 17 early sign and symptoms of myocardial infarction listed by respondents, arranged in decreasing order of frequency. Chest pain was most commonly recognized symptom (83.3%), followed by difficulty in breathing (68.3%), sweating (65%), fever (63.33%), change in sleep pattern (61.66%), jaw pain (58.33%), headache

(56.67%), dizziness & double vision (51.66%), radiation of chest pain to neck and shoulders (45%), characteristics of chest pain was identified by only 38.3 % subjects. Memory loss was indicated by only 38.3%, followed by fatigue (36.33%), bloated and painful stomach (30%), palpitations (28.33%), cough (26.67%), radiation of chest pain to arms (21.66%) and absence of chest pain in females was recognized by only 6.66%. Hence, it can be concluded that knowledge regarding early sign and symptoms of MI is not adequate among the hypertensive patients.

CONCLUSION

Results indicated a relatively limited knowledge of MI symptoms among hypertensive patients. While some symptoms were commonly recognized, e.g. chest pain or discomfort, difficulty in breathing and sweating other symptoms, e.g. radiation of chest pain to arms and cough was poorly identified. A lack of knowledge about symptoms is important because it can extend patient delay in seeking the emergency services and initiate treatments such as thrombolysis and percutaneous angioplasty. Such delays could be mitigated by public health campaign.

REFERENCES

1. Monahan F, Sands J, Neighbors M, Marek J. Medical surgical nursing health and Illness perspectives: Hypertension. 8th ed. Noida: Mosby Elsevier; 2009. p. 857.
2. Chaudhary V. Health topics index: Hypertension becoming an epidemic in India; 2013 April 6. Available from URL: http://www.thesundayindian.com/en/story/hypertension-becoming-an-epidemic-in-india-experts/118/47121/.
3. Chatterjee K, Anderson M, Heistad D, Kerber RE. Cardiology an illustrated book: Hypertension. 1st ed. Vol. 1. New Delhi: Jaypee Brothers Medical Publisher; 2013.p. 837.
4. Mahajan H, Kazi Y, Shrama B, Velhal GD. Assessment of KAP, Risk Factors and Associated Co-Morbidities in Hypertensive Patients. IOSR Journal of Dental and Medical Sciences (IOSRJDMS). 2012; 1(2): 06-14. Available from URL: http://www.iosrjournals.org.
5. International Cardiovascular Disease Statistics. Statistical Fact Sheet — Populations. Available from URL: http://www.bellevuecollege.edu/artshum/materials/inter/ Spring04/m SizeMatters/ internatCardioDisSTATsp04.pdf.
6. Chen MA. The New York Times: The heart attack; 2015 March 8. Available from URL: http://www.nytimes.com/health/guides/disease/heart-attack/ overview.html.
7. Samantha J, Eischeid Z, Loeb SJ. Recognizing myocardial infarction in women. Spring. 2010 June; 1-7. Available from URL: http://www.nursingcenter.com/_pdf _.aspx?an=00152193-201003001-00001.
8. Goel PK, Srivastava SK, Ashfaq F, Gupta PR, Saxena PC, Agarwal R et al. A study of clinical presentation and delays in management of acute myocardial infarction in community. Indain Heart Journal. 2012 May; 64(3): 295-301. Available from URL:http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3860806/.
9. Whitaker S, Baldwin T, Tahir M, Choudhry O, Senior A, Greenfield S. Public knowledge of the symptoms of myocardial infarction: a street survey in Birmingham, UK. Family Practice. 2011 October 5; 0: 1-6. Available from URL: http://fampra.oxfordjournals .org/content/early/2011/10/05/fampra.cmr079.full.