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Research Article

**A CROSS-SECTIONAL STUDY ON PERICARDIAL EFFUSION
(PE) FREQUENCY WITH RESPECT TO GENDER, DISEASE
DURATION & AMI SUB-TYPE STRATIFICATION****Dr. Rabia Hanif, Dr. Anam Nazir, Dr. Sadia Basheer**
Bahawal Victoria Hospital, Bahawalpur**Abstract:****Objective:** We aimed to assess the pericardial effusion (PE) frequency in the patients of acute MI incidence.**Methodology:** Our cross-sectional research conducted at Bahawal Victoria Hospital Bahawalpur from March to December 2017 on a total of one hundred cases of acute MI. The selection of the patients was without any discrimination of gender as it included both males and females. The male and females' patients were in the age bracket of thirty years to eighty years. We did not include cases of trauma, bleeding disorder and hypoalbuminemia. Pericardial Effusion (PE) cases were such cases who had an accumulation of fluid observed around Volumatic heat observed through echocardiography of trans-thoracic.**Results:** Research sample consisted of a total one hundred patients who presented acute MI from both male and female population. Males and females were respectively 54 and 46 in the mean age of (51.57 ± 10.43) years. Pericardial Effusion (PE) cases were eighteen in the total of one hundred with a proportion of eighteen percent of total acute MI cases. No difference was visible in the disease duration and gender with significant respective P-values as 0.97 and 0.87. Pericardial Effusion (PE) had a significantly higher proportion in the acute AAMI patients as sixteen patients suffered from this incidence with a proportion of (22.22%) against two cases (7.14%) with a significant P-value of (0.001).**Conclusion:** Every fifth case of acute MI is a case of Pericardial Effusion (PE) which is even significantly high in the acute AAMI cases.**Keywords:** Pericardial Effusion (PE), Acute MI, Acute Myocardial Infarction (AMI), Angina, Cross-Sectional, Trauma, Fluid, Echocardiography and Trans-Thoracic.**Corresponding author:****Dr. Rabia Hanif,**
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INTRODUCTION:

Ischemic heart disease incidence is one of the common diseases burdens prevalent all over the globe. This incidence is also among most lethal and deadliest trauma and infection which causes a great amount of morbidity and mortality all over the world. A subset entity is acute coronary syndrome which is actually chest pain syndrome and myocardium ischemic changes. We can divide it into two categories such as Acute Myocardial Infarction (AMI) and angina. The stratification actually basis on the chest pain duration, significant ST segment variations and an increased cardiac enzyme. AMI has a further subdivision of NSTEMI and STEMI purely depending on the increase in ST in the previous setting [1]. Various broad functional and structural disorders and complications are also having a connection with this incidence. Along with various cardiac and extracardiac complications, there is an indirect effect on the heart which includes shock, clot embolization and Pericardial Effusion (PE) as repeated incidences [2, 3].

Pericardial Effusion (PE) is actually a fluid accumulation in the pericardial membrane around the heart that compresses the heart and causes heart failure and in Hemorrhage Effusion (HE) cases in the shape of a ruptured myocardium which can be the reason of death and as well as tamponade and death as well. As it is a threat to the life of the patients and emergency state that relies on the rate and volume of the fluid accumulation [4, 5].

MATERIAL AND METHODS:

Our cross-sectional research conducted at Bahawal Victoria Hospital Bahawalpur from March to

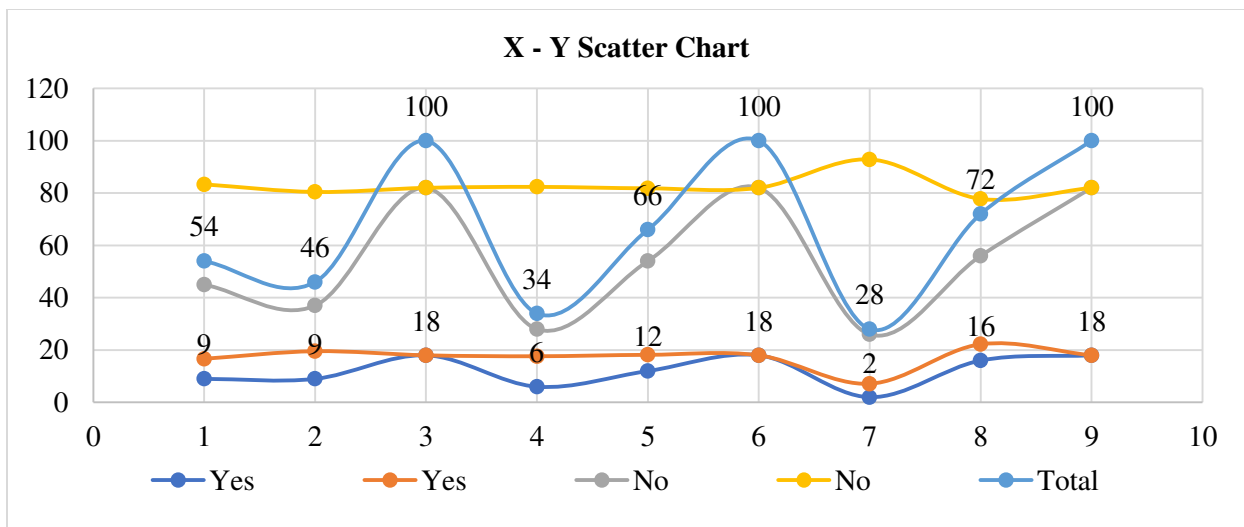
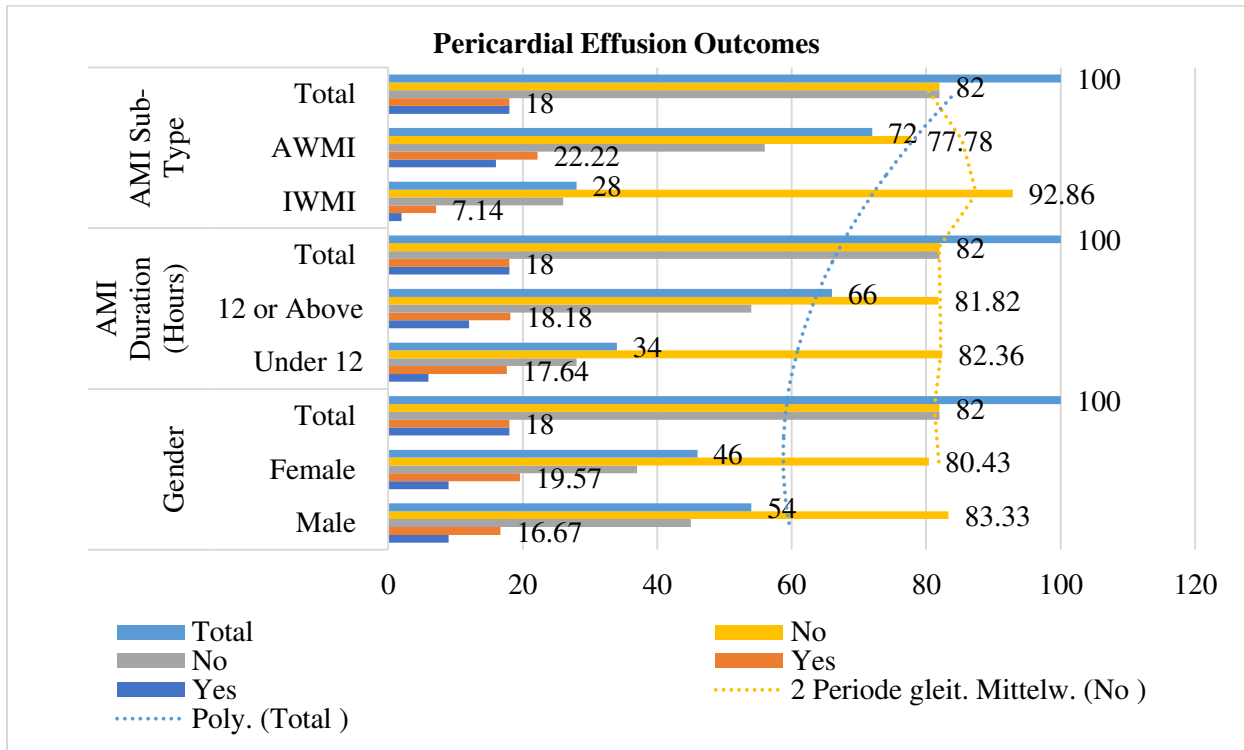
December 2017 on a total of one hundred cases of acute MI. The selection of the patients was without any discrimination of gender as it included both males and females. The male and females' patients were in the age bracket of thirty years to eighty years. We did not include cases of trauma, bleeding disorder and hypoalbuminemia. Pericardial Effusion (PE) cases were such cases who had an accumulation of fluid observed around Volumatic heat observed through echocardiography of trans-thoracic. We used non-probability consecutive sampling technique for sample selection. Research entered the data and analyzed it through SPSS software. He also applied Chi-Square Test and taken significant P-value as (< 0.05).

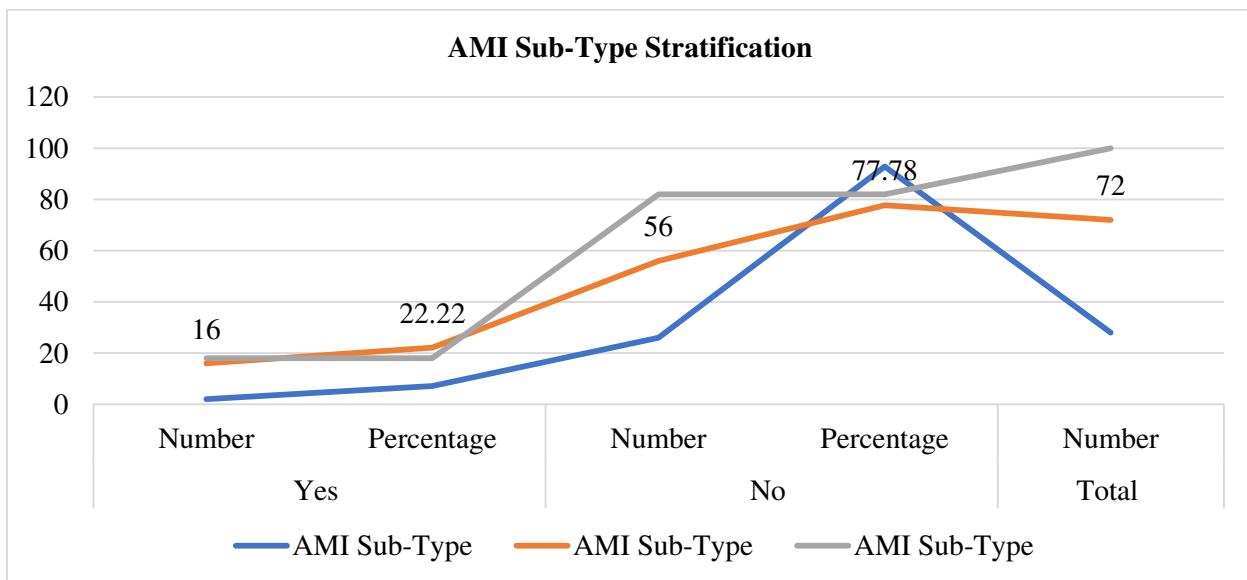
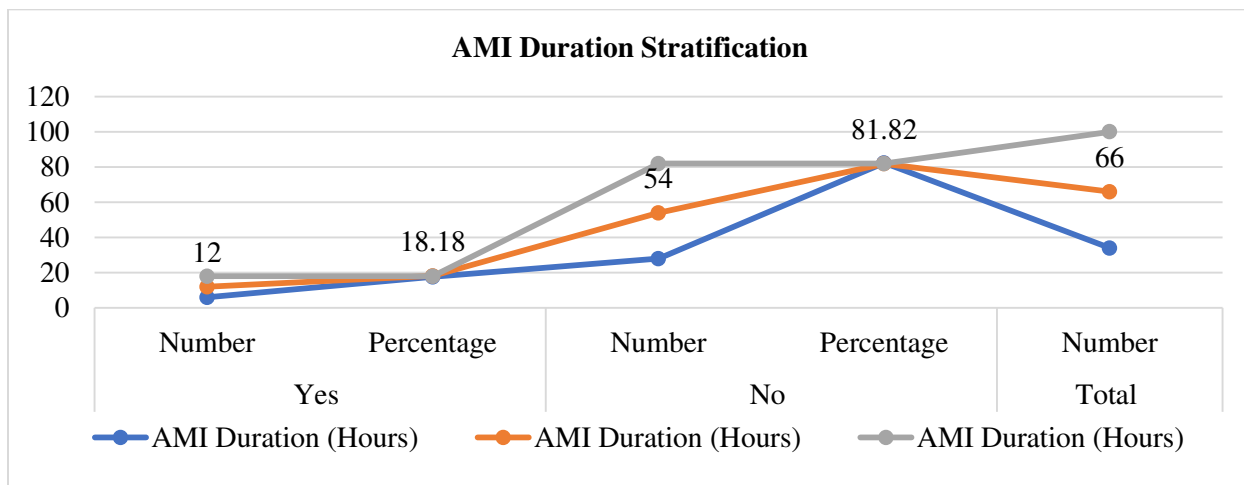
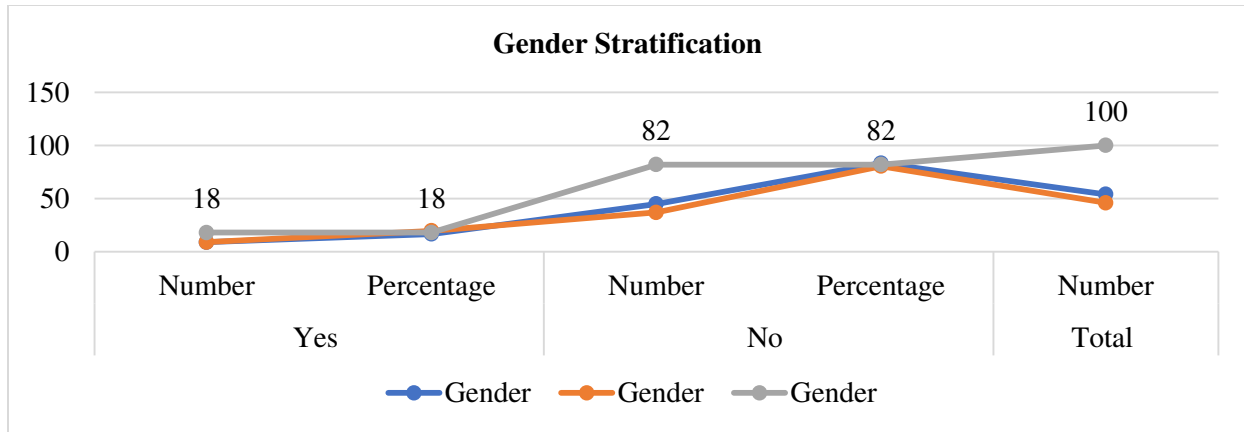
RESULTS:

The research sample consisted of a total one hundred patients who presented acute MI from both male and female population. Males and females were respectively 54 and 46 in the mean age of (51.57 ± 10.43) years with a dominance of male population over female population as reflected in the given tabular data. Pericardial Effusion (PE) cases were eighteen in the total of one hundred with a proportion of eighteen percent of total acute MI cases. No difference was visible in disease duration and gender with significant respective P-values as 0.97 and 0.87 as reflected in the given tabular data. Pericardial Effusion (PE) had a significantly higher proportion in the acute AWMIs patients as sixteen patients suffered from this incidence with a proportion of (22.22%) against two cases (7.14%) with a significant P-value of (0.001) as reflected in the given tabular data.

Table: Pericardial Effusion (PE) Outcomes Analysis

Pericardial Effusion (PE)		Yes		No		Total	P – Value
		No	%	No	%	No	
Gender	Male	9	16.67	45	83.33	54	0.870
	Female	9	19.57	37	80.43	46	
	Total	18	18	82	82	100	
AMI Duration (Hours)	Under 12	6	17.64	28	82.36	34	0.970
	12 or Above	12	18.18	54	81.82	66	
	Total	18	18	82	82	100	
AMI Sub-Type	IWMI	2	7.14	26	92.86	28	0.001
	AWMI	16	22.22	56	77.78	72	
	Total	18	18	82	82	100	





DISCUSSION:

Myocardial Infarction (MI) can be possibly lethal just not because of heart but at the same time because of numerous associated non-cardiac complications such as Pericardial Effusion (PE). Increased fluid accumulation and larger volumes are capable enough to compress the heart and possibly cause heart failure and subsequent death. It is mandatory to manage and diagnose the disease risk factors in order to reduce the chances of possible increased morbidity and mortality.

Pericardial Effusion (PE) cases were eighteen in the total of one hundred with a proportion of eighteen percent of total acute MI cases. Slightly less number and proportion are visible than previously reported research studies. Hafeez and his colleagues conducted a research on acute MI patients and reported PE in 64 cases (32%) [6]. Ali also reported the same findings where the incidence of PE reported in seven cases (27%) [7]. Contrary to other authors the research conducted on AMI cases with developing PE by Belkin reported the incidence of eight percent cases in the total research population [8]. Variations may have an association with the criteria of inclusion, severity difference and management plan of the research.

Pericardial Effusion (PE) had a significantly higher proportion in the acute AAMI patients as sixteen patients suffered from this incidence with a proportion of (22.22%) against two cases (7.14%) with a significant P-value of (0.001). There were significant and insignificant variations in the previous research studies about the incidence of acute MI (AMI) with the development of PE. It is a fact that Pericardial Effusion (PE) is more in the AAMI diagnosed patients than the IWMI diagnosed patients [9 – 12].

CONCLUSION:

Every 5th case of acute MI is a case of Pericardial Effusion (PE) which is even significantly high in the acute AAMI cases.

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