Research Article
AMERICAN JOURNAL OF PHARMACY AND HEALTH RESEARCH
www.ajphr.com
2017, Volume 5, Issue 6
ISSN: 2321–3647(online)

Assessment of Health Outcome In Post *PTCA* Myocardial Infraction Patients by Using SAQ-7 Questionnaire

Gayathri.M[1]*, Karthikeyan.V[1,] Anoop Gopinathan[2]
1.Department of Pharmacy Practice, Grace College of Pharmacy, Kodunthirapully, Palakkad, Kerala-678004, India
2.Department of Interventional cardiology, Meditrina Welcare Hospital, Palakkad, Kerala-678004, India

ABSTRACT

To monitor and assess the health outcome of *PTCA* patients by using SAQ-7 questionnaire. A prospective study was conducted in Meditrina Welcare Heart Centre, Palakkad from November 2016- April 2017. A total of 189 cases were collected. Patients of age between 31 and above underwent *PTCA* are included in the study. The majority of the patients are males (78%). Assessment of health outcome after *PTCA* by using SAQ-7 questionnaire show that 59.45% has good health outcome (SAQ7 score ranges from 91-100) as compared to health outcome before *PTCA* majority have poor health outcome (22.75%) From the study it shows that the majority of the patients have improved their health outcome after *PTCA*.

Keywords: MI, *PTCA*, SAQ-7

*Corresponding Author Email: gayathrijayakumarhotmail1992@gmail.com
Received 15 June 2017, Accepted 21June 2017

Please cite this article as: Gayathri. M *et al*., Assessment of Health Outcome In Post PTCA Myocardial Infraction Patients by Using SAQ-7 Questionnaire. American Journal of Pharmacy & Health Research 2017.

INTRODUCTION

Reperfusion therapy with a thrombolytic agent reduces mortality and improves left ventricular function in myocardial infarction (MI).[1, 2] after thrombolytic therapy, about 50% of patients still have some residual stenosis of the infarct-related artery. This predisposes to recurrent ischemia and recurrent coronary occlusion, which may worsen ventricular function or lead to impaired quality of life or catastrophic events such as sudden death or re-infarction. [3, 4, 5, 6] Percutaneous transluminal coronary angioplasty (*PTCA*) of the stenotic infarct artery reduces the degree of stenosis, but the procedure itself sometimes produces re-occlusion, which may lead to an extension of the infarct. In other cases, despite persistent occlusion or stenosis of the infarct-related artery, flow to the ischemic myocardium may be restored by collateral flow. Therefore, the balance of benefits versus risks with *PTCA* in an individual patient cannot be generally predicted, especially if there is no evidence of ongoing ischemia or hemodynamic instability.

Attempting *PTCA* instead of thrombolytic therapy in patients presenting very early after myocardial infarction (primary *PTCA*) has the theoretical advantage of early and complete coronary patency in the vast majority of patients in addition to decreasing residual stenosis. Therefore, compared with *PTCA* as an adjuvant to thrombolytic therapy, primary *PTCA* has the potential of decreasing the extent of myocardial necrosis. Such a strategy could lead to greater preservation of ventricular function and hence better short-term and long-term survival. On the other hand, primary *PTCA* requires rapid access to a catheterization laboratory 24 hours per day. Therefore, it may not be widely feasible; moreover, it may be associated with greater perioperative risks.

Despite the widespread use of early post infarction *PTCA* after MI in the United States, the benefit of this intervention in MI has remained unproven. [7, 8] Although a few randomized trials have suggested some benefit to performing *PTCA* after thrombolysis,[9, 10, 11] other trials have shown no advantage or an adverse trend compared with more conservative management. Large properly randomized controlled trials of *PTCA* in MI are difficult to organize, since only a limited number of centers can offer *PTCA*. [12, 13, 14, 15, 16] Further, there are additional reasons that make it difficult to achieve a sufficient difference in the proportion of patients receiving *PTCA* in the intervention and control groups. First, the procedure may prove impracticable among a high proportion of patients, or the stenosis of the culprit lesion may have spontaneously decreased in severity so that *PTCA* might not be considered to be indicated. Second, *PTCA* cannot be withheld from patients randomized to the control arm of these trials when specific indications,

such as ischemia, arise. [17, 18] Third, in some trials, in an attempt to resemble clinical decision making, *PTCA* is attempted in the invasive group only if certain clinical situations arise or if a considerable degree of residual stenosis remains. Although all the above problems decrease statistical power, such trials potentially shed some light on two contrasting generic strategies (more invasive versus less invasive). [19, 20]

MATERIALS AND METHOD

A prospective observational study was conducted at Meditrina Welcare Heart Centre, Palakkad, for a period of 6 months duration (December 2016- May 2017). After getting approval from the ethics committee of the institution, subjects were selected based on inclusion & exclusion criteria. This study population includes both inpatients and out patients with myocardial infarction with or without co - morbidities, Patients on both sex, Age greater than 30 years and exclude population are physically inactive patients, mentally retarded patients and patients who are not willing to participate in the study. The patients inform consent was obtained from all participants prior to the study. Questionnaire survey was conducted to assess the prevalence and risk factors of myocardial infarction. Other relevant information on the disease, prevalence, associated symptoms, diagnosis were collected on a data entry form. In this study SAQ-7 Malayalam questionnaire is obtained from the patients before and after angioplasty to assess the health outcome in post angioplasty patients. The SAQ -7 is a disease- specific instrument that measures 3 dimensions of health outcome that are particularly important to patients with coronary artery disease (CAD): physical limitations due to CAD, anginal frequency, treatment satisfaction. The descriptive statistical analysis was carried out by using graph pad prism (Version 6.0) software.

RESULTS AND DISCUSSION:

A total sample (n=189) consisted of 77.78% (n=147) of patients are in male and 22.22% (n=42) of patients were in female. In this study, majority of male populations are under went *PTCA*.

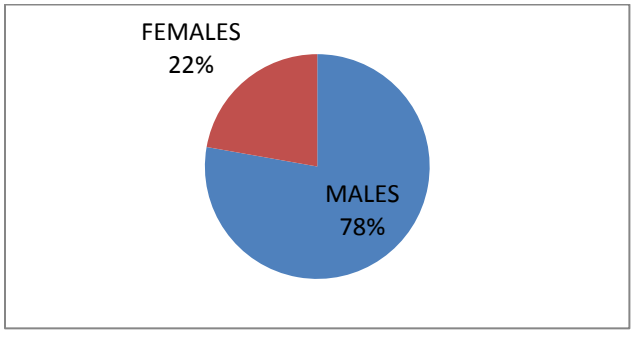

Figure 1: Age Wise Distribution

Table 1: Physical limitation score of patients before and after *PTCA*

Score Range	No of patients Before *PTCA*	Percentage (%)	No of patients After *PTCA*	Percentage (%)
0-10	106	56.08	1	0.52
11-20	17	8.99	2	1.05
21-30	10	5.29	0	0
31-40	13	6.87	0	0
41-50	19	10.05	3	1.58
51-60	8	4.23	8	4.23
61-70	1	0.52	6	3.17
71-80	2	1.05	0	0
81-90	2	1.05	50	26.45
91-100	11	5.82	119	62.96

Among the total study population (n=189),comparing the physical limitation score of patients before and after *PTCA*, this study show that before *PTCA* majority of patients(56.08%) have score in between 0-10 and after *PTCA* majority of patients(62.96%) have score in between 91-100.

Table 2: Angina frequency score of patients before and after *PTCA*.

Score Range	No of patients Before *PTCA*	Percentage (%)	No of patients After *PTCA*	Percentage (%)
0-10	40	21.16	2	1.05
11-20	6	3.17	0	0
21-30	15	7.93	0	0
31-40	30	15.87	1	0.52
41-50	41	21.69	1	0.52
51-60	23	12.16	2	1.05
61-70	9	4.76	1	0.52
71-80	8	4.23	15	7.93
81-90	9	4.76	30	15.87
91-100	8	4.23	137	72.48

Among the total study population (n=189),comparing the angina frequency score of patients before and after *PTCA*, this study show that before *PTCA* majority of patients(21.69%) have score in between 41-50 and after *PTCA* majority of patient(72.48%) have score in between 91-100.

Table 3: Quality of life score of patients before and after *PTCA*.

Score Range	No of patients Before *PTCA*	Percentage (%)	No of patients After *PTCA*	Percentage (%)
0-10	97	51.32	0	0
11-20	29	15.34	0	0
21-30	28	14.81	0	0

31-40	7	3.70	1	0.52
41-50	10	5.29	5	2.64
51-60	0	0	1	7.93
61-70	1	0.52	15	7.93
71-80	5	2.64	54	28.57
81-90	1	0.52	22	11.64
91-100	11	5.82	91	48.14

Among the total study population (n=189),comparing the quality of life score of patients before and after *PTCA*, this study show that before *PTCA* majority of patients(51.32%) have score in between 0-10 and after *PTCA* majority of patient(48.14%) have score in between 91-100.

Table 4: SAQ-7 score of patients before and after *PTCA*.

Score Range	No of patients before *PTCA*	Percentage (%)	No of patients After *PTCA*	Percentage (%)
0-10	43	22.75	0	0
11-20	35	18.51	0	0
21-30	33	17.46	0	0
31-40	31	16.40	0	0
41-50	19	10.05	4	2.11
51-60	10	5.29	5	2.64
61-70	6	3.17	6	3.17
71-80	1	0.52	14	7.40
81-90	2	1.05	48	25.39
91-100	9	4.76	112	59.25

Among the total study population (n=189),comparing the quality of SAQ-7 score of patients before and after *PTCA*, this study show that before *PTCA* majority of patients(22.75%) have score in between 0-10 and after *PTCA* majority of patient(59.25%) have score in between 91-100.

DISCUSSION

In this prospective study it was observed that the majority of males (77.78%) had undergone *PTCA*. By comparing the physical limitation score before and after *PTCA*, before *PTCA* majority of patients have limited physical activity i.e., 56.08% (score ranges from 0-10) and only 5.82% have good physical activity (score ranges from 91-100). But after *PTCA* 62.96% patients have good physical activity (score ranges from 91-100) and only 0.52% have least physical activity (score ranges from 0-10).By comparing the angina frequency score before and after *PTCA*, before *PTCA* majority of patients have limited angina frequency score i.e., 21.16% (score ranges from 0-10) and only 4.23% have good angina frequency score (score ranges from 91-100). But after *PTCA* 72.48% patients have good angina frequency score (score ranges from 91-100) and

only 1.05% have least angina frequency score (score ranges from 0-10). By comparing the quality of life score before and after *PTCA*, before *PTCA* majority of patients have limited quality of life ie, 51.32% (score ranges from 0-10) and only 4.76% have quality of life score (score ranges from 91-100). But after *PTCA* 48.14% patients have good angina frequency score (score ranges from 91-100) and 0% of patients have limited quality of life score (score ranges from 0-10).This study reveals that physical limitation, angina frequency and quality of the life after *PTCA* , patients have show improvement within one month. Overall SAQ-7 score show the cardio vascular health outcome of the patients. Before *PTCA* majority of patients (22.75%) have limited cardio vascular health outcome but after *PTCA* 59.25% patients show good cardio vascular health outcome.

CONCLUSION

From the study it was clear that after *PTCA* patients have improved their physical limitation and quality of life and there is a tramadeous decrease in angina frequency. From SAQ-7 score it is clear that cardiovascular health outcome of patients increased after *PTCA*.

ACKNOWLEDGEMENT

I hereby thank all the people who made my project work a complete success with their encouragement support and guidelines.

REFERENCE:

1. Stampfer MJ, Goldhaber SZ, Yusuf S, Peto R, Hennekens CH. Effect of intravenous streptokinase on acute myocardial infarction: pooled results from randomized trials. *N Engl J Med.* 1982; 307:1180-1182.
2. Topol EJ, Ellis SG, Cosgrove DM, Bates ER, Muller DW, Schork NJ, Schork MA, Loop FD. Analysis of coronary angioplasty practice in the United States with an insurance-claims data base. *Circulation.*1993; 87:1489-1497.
3. Ryan TJ. Angioplasty in acute myocardial infarction: is the balloon leaking? *N Engl J Med.*1987; 317:624-626.
4. Cheitlin MD. The aggressive war on acute myocardial infarction: is the blitzkrieg strategy changing?*JAMA.* 1988; 260:2894-2896.
5. Guerci AD, Ross RS. TIMI II and the role of angioplasty in acute myocardial infarction. *N Engl J Med.*1989; 320:663-665.
6. Topol E. Coronary angioplasty for acute myocardial infarction. *Ann Intern Med.* 1988; 109:970-980.

7. Sleight P. Do we need to intervene after thrombolysis in acute myocardial infarction? *Circulation.*1990; 81:1707-1709.
8. Meier B. Balloon angioplasty for acute myocardial infarction: was it buried alive? *Circulation.* 1990; 82:2243-2245.
9. Erbel R, Pop T, Henrichs K-J, von Olshause K, Schuster CJ, Rupprecht HJ, Steuernagel C, Meyer J. Percutaneous transluminal coronary angioplasty after thrombolytic therapy: a prospective controlled randomized trial. *J Am Coll Cardiol.* 1986; 8:485-495.
10. Erbel R, Pop T, Diefenbach C, Meyer J. Long-term results of thrombolytic therapy with and without percutaneous transluminal coronary angioplasty. *J Am Coll Cardiol.* 1989; 14:276-285.
11. Topol EJ, O'Neill WW, Langburd AB, Walton JA, Bourdillon PDV, Bates ER, Grines CL, Schork AM, Kline E, Pitt B. A randomized, placebo-controlled trial of intravenous recombinant tissue-type plasminogen activator and emergency coronary angioplasty in patients with acute myocardial infarction. *Circulation.* 1987; 75:420-428.
12. Uebis R, von Essen R, Merx W, Schmidt WG, Emons HP, Effert S. Combined medical and mechanical recanalization versus superselective streptokinase alone: reperfusion rate and time occlusion.*Circulation*. 1984; 70(suppl II):II-329. Abstract.
13. Guerci AD, Gerstenblith G, Brinker JA, Chandra NC, Gottlieb SO, Bahr RD, Weiss JL, Shapiro EP, Flaherty JT, Bush DE, Chew PH, Gottlieb SH, Halperin HR, Ouyang P, Walford GD, Bell WR, Fatterpaker AK, Llewellyn M, Topol EJ, Healy B, Siu CO, Becker LC, Weisfeldt ML. A randomized trial of intravenous tissue plasminogen activator for acute myocardial infarction with subsequent randomization to elective coronary angioplasty. *N Engl J Med.* 1987; 317:1613-1618.
14. Ellis SG, Ribeiro da Silva E, Heyndrickx GR, Talley JD, Cernigliaro C, Steg G, Spaulding C, Nobuyoshi M, Erbel R, Vassanelli C, Topol EJ, for the RESCUE Investigators. Final results of the randomized RESCUE study evaluating *PTCA* after failed thrombolysis for patients with anterior infarction. *Circulation*. 1993;88.
15. Belenkie I, Traboulsi M, Hall C, Hansen JL, Roth DL, Manyari D, Filipchuck NG, Schnurr LP, Rosenal TW, Smith ER, Knudtson ML. Rescue angioplasty during myocardial infarction has a beneficial effect on mortality: a tenable hypothesis. *Can J Cardiol.* 1992; 8:357-362.

16. Van den Brand MJ, Betriu A, Lopez Bescos L, Nijssen K, Pfisterer ME, Renkin J, Saenz Cusi L, Zijlstra F, Simoons ML. Randomized trial of deferred angioplasty after thrombolysis for acute myocardial infarction. *Coron Artery Dis.* 1992; 3:393-401.
17. Simoons ML, Arnold AER, Betriu A, de Bono DP, Col J, Dougherty FC, von Essen R, Lambertz H, Lubsen J, Meier B, Michel PL, Raynaud P, Rutsch W, Sanz GA, Schmidt W, Serruys PW, Thery C, Uebis R, Vahanian A, Van de Werf F, Willems GM, Wood D, Verstraete M, for the European Cooperative Study Group for Recombinant Tissue-Type Plasminogen Activator (rTPA). Thrombolysis with tissue plasminogen activator in acute myocardial infarction: no additional benefit from immediate percutaneous coronary angioplasty. *Lancet.* 1988; 1:197-203.
18. Arnold AER, Simoons ML, Van de Werf F, de Bono DP, Lubsen J, Tijssen JGP, Serruys PW, Verstraete M, for the European Cooperative Study Group. Recombinant tissue-type plasminogen activator and immediate angioplasty in acute myocardial infarction: one-year follow-up. *Circulation.* 1992; 86:111-120.
19. The TIMI Study Group. Comparison of invasive and conservative strategies after treatment with intravenous tissue plasminogen activator in acute myocardial infarction: results of the Thrombolysis in Myocardial Infarction (TIMI) Phase II Trial. *N Engl J Med.* 1989; 320:618-627.
20. Williams DO, Braunwald E, Knatterud G, TIMI Investigators. One-year results of the Thrombolysis in Myocardial Infarction Investigation (TIMI) Phase II Trial. *Circulation.* 1992; 85:533-542.