Original Article

A Study of Incidence and Outcome of complications during femoral Interventions

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Abstract

Introduction: Recent studies have identified bleeding after diagnostic cardiac catheterization (CATH) and percutaneous coronary intervention (PCI) procedures, particularly retroperitoneal bleeding. **Aims and Objectives:** To Study of Incidence and Outcome of Complications during Femoral Interventions. **Methodology:** This was a Hospital based cross-sectional study in the Patients undergoing Femoral Interventions for the various clinical conditions at tertiary health center, all the patient with age more than 20 yrs. during the Year January 2014- January 15 were taken into study those patients who given written consent were included into study while those who does not given consent and having serious illness and immuno-compromised state like uncontrolled diabetes etc. were excluded from the study. **Result:** The majority of the Patients were from 40-50- 25.45 % followed by 50-60- 23.63 %; 30-40- 20.90 %; >60- 19.09%; 20-30- 10.90% . Majority of the Patients were Male i.e. 56.36% and 43.63% were Female Out of the 110 Patients complications occurred in 15 patients hence the incidence of complications observed to 13.04% the most common complications were Minor vascular complication i.e. 2.60% and Loss of distal pulse-2.60%, Major vascular complication-1.73%, Pseudoaneurysm-1.73%, Retroperitoneal bleeding -0.86%, Other major bleeding- 0.86%, Vascular death- 0.86% and AV fistulae -0.86%, Hematoma -0.86% respectively. Out of the total 15 complications 73.33% Recovered and Death occurred in 6.66% and 20.00% referred to higher center for vascular surgeries. **Conclusion:** The incidence of complication in our study was found to 13.04% and most common type of complications was Minor vascular complication, Loss of distal pulse etc. So Still the procedure is with higher complications so the procedure should be done under observation of expert and all complication should be identified early and managed effectively by all by prompt vascular surgeons

Key Words: Complications of Femoral Interventions, AV fistulae, Hematoma, Pseudo- aneurysm.

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INTRODUCTION

Recent studies have identified bleeding after diagnostic cardiac catheterization (CATH) and percutaneous coronary intervention (PCI) procedures [1– 4], particularly retroperitoneal bleeding [5,6], as a significant source of morbidity and mortality after these procedures. Although not all of the bleeding can be directly attributed to complications at the procedure access site, access site complications remain a significant factor in post-procedural bleeding [7–9]. Although medical and PCI treatments have been modified to minimize access site bleeding from anticoagulant and antiplatelet therapies [8,10], their use as pre-procedural treatment has increased substantially in the past decade, which could increase the risk of vascular complications. At the same time, strategies aimed at reducing femoral artery access site complications, such as use of fluoroscopy to guide femoral artery access [11], utilization of vascular closure devices (VCDs), and use of smaller sheath sizes, have been introduced into practice. Whether the awareness of the importance of access site complications on overall procedural outcomes [12–14], or utilization of VCDs ([15, 16]) and smaller sheath sizes [12,17,18], or changes in medical and PCI practice [8,10] have had an effect on the incidence of vascular complications in the past decade is not clear so

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we have done study to see the incidence of various complications and their outcome at our institute .

METHODOLOGY

This was a Hospital based cross-sectional study in the Patients undergoing Femoral Interventions for the various clinical conditions at tertiary health center , all the patient with age more than 20 yrs. during the Year January 2014-January 15 were taken into study those patients who given written consent were included into study while those who does not given consent and having serious illness and immuno -compromised state like uncontrolled diabetes etc. Were excluded from the study.

RESULT

Table 1: Age wise Distribution of the Patients

Age	No.	Percentage (%)
20-30	12	10.90 %
30-40	23	20.90 %
40-50	28	25.45 %
50-60	26	23.63 %
>60	21	19.09 %
Total	**110**	**100.00 %**

The majority of the Patients were from 40-50- 25.45 % followed by 50-60- 23.63 %; 30-40- 20.90 %; >60- 19.09 %; 20-30- 10.90 %

Table 2: Gender wise Distribution of the Patients

Sex	No.	Percentage (%)
Male	62	56.36%
Female	48	43.63%
Total	**110**	**100%**

Majority of the Patients were Male i.e. 56.36% and 43.63% were Female

Table 3: Incidence of Various Complications

Complication	No.	Percentage (%)
Major vascular complication	2	1.73%
Retroperitoneal bleeding	1	0.86%
Other major bleeding	1	0.86%
Loss of distal pulse	3	2.60%
Vascular death	1	0.86%
Minor vascular complication	3	2.60%
Pseudoaneurysm	2	1.73%
AV fistulae	1	0.86%
Hematoma	1	0.86%
Total	**15**	**13.04%**

Out of the 110 Patients complications occurred in 15 patients hence the incidence of complications observed to 13.04% the most common complications were Minor vascular complication i.e. 2.60% and Loss of distal pulse-2.60%,Major vascular complication-1.73%, Pseudoaneurysm-1.73%,Retroperitoneal bleeding -0.86%, Other major bleeding- 0.86%, Vascular death- 0.86% and AV fistulae -0.86%,Hematoma -0.86%respectively .

Table 4: Outcome in the Patients

Outcome	No.	Percentage
Recovered	11	73.33%
Death	1	6.66%
Referred to Higher Centre	3	20.00%
Total	**15**	**100%**

Out of the total 15 complications 73.33%Recovered and Death occurred in 6.66% and 20.00% referred to higher center for vascular surgeries.

DISCUSSION

Complications can be classified in a variety of ways but are traditionally described either in relation to disease indication, the general phases of a procedure, or the use of specific devices. PCI performance is defined in terms of procedural success which identifies anatomical (or angiographic) success, (the enlargement of an epicardial vessel to a minimum luminal diameter of <10% stenosis or as near to 0% as possible, and TIMI 3 flow), without clinical complications [19, 20]. The latter are most commonly recorded as major adverse cardiac events (MACE) or major adverse cardiac and cerebrovascular events (MACCE). These composite terms capture an aggregate of death, myocardial infarction (MI) (or repeat MI in the context of acute coronary syndromes (ACS)), emergency surgical revascularisation, or stroke. These definitions have been derived from randomised clinical trials in the field of interventional cardiology but their application and scope are extended in clinical practice. North American guidelines [21] (2006) divide PCIcomplications into those related to arterial catheterisation in general, and those related to specific technologies. In these guidelines, selected complications that have been drawn from the ACC-National Cardiovascular Data Registry (NCDR)[22]. In Europe definitions since 2005 have been based on the Cardiac Audit and Registration Standards (CARDS) dataset [23]

Procedural complication categories [20]: Death (related to the procedure, regardless of mechanism), Stroke, MI (related to the procedure, regardless of mechanism), Ischaemia requiring emergency CABG, Vascular access site complication, Contrast agent nephropathyExcessive bleeding, requiring treatment, Other (such as coronary perforation and tamponade)

In our study we have observed that The majority of the Patients were from 40-50- 25.45 % followed by 50-60- 23.63 %; 30-40- 20.90 %; >60- 19.09 %; 20-30- 10.90 % Majority of the Patients were Male i.e. 56.36% and 43.63% were Female . Out of the 110 Patients complications occurred in 15 patients hence the incidence of complications observed to 13.04% the most common complications were Minor vascular complication i.e. 2.60% and Loss of distal pulse-2.60%,Major vascular

complication-1.73%, Pseudoaneurysm-1.73%, Retroperitoneal bleeding -0.86%, Other major bleeding-0.86%, Vascular death- 0.86% and AV fistulae -0.86%,Hematoma -0.86%respectively . Out of the total 15 complications 73.33% Recovered and Death occurred in 6.66% and 20.00% referred to higher center for vascular surgeries.

CONCLUSION

The incidence of complication in our study was found to 13.04% and most common type of complications were Minor vascular complication, Loss of distal pulse etc. So Still the procedure is with higher complications so the procedure should be done under observation of expert and all complication should be identified early and managed effectively by all by prompt vascular surgeons

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