

Incidence of perioperative myocardial infarction and cardiac death after vascular surgery

Surgery Type Categories	Total N	Incidence of MI	Mortality
Carotid endarterectomy (total)	2,437	34/2,437 = 1.4%	2/2,437 = 0.08%
• Internal carotid endarterectomy	2,349		
• External carotid endarterectomy	17		
• Carotid-subclavian graft	66		
• Carotid-carotid graft	5		
Aortic surgery prosthetic grafts (total)	1,934	37/1,934 = 1.91%	10/1,934 = 0.52%
Thoracic (total)	332	4/332 = 1.2%	3/332 = 0.9%
• Thoraco-abdominal aneurysm repair	139		
• Aorto-celiac graft*	16		
• Aorto-mesenteric graft [†]	88		
• Suprarenal	89		
Abdominal (total)	1,602	33/1,602 = 2.06%	7/1,602 = 0.44%
Aorto-bi-iliac	1,300		
Aorto-bi-femoral	244		
Aorto-iliac - aorto-femoral	58		
Peripheral vascular surgery (total)	2,577	36/2,577 = 1.4%	10/2,577 = 0.4%
Peripheral vascular reconstructive surgery (total)	1,246	30/1,246=2.4%	6/1,246 = 0.48%
• Ilio-femoral graft	119		
• Femoral-femoral graft	180		
• Profundoplasty	61		
• Femoral-popliteal graft	439		
• Femoral-tibial graft (anterior and posterior)	270		
• Femoral-peroneal graft	177		
Amputations (total)	1,331	6/1,331 = 0.45%	4/1,331 =0.30%
• Toe	332		
• Transmetatarsal	267		
• Leg below the knee	477		
• Leg above the knee	255		
Total	6,948	107/6,948 = 1.54%	22/6,948 = 0.31%

*Performed as primary procedure, not as a part of thoraco-abdominal aneurysm repair; † Includes procedures performed for reconstruction of either superior (n=48) or inferior (n=40) mesenteric arteries.

Summary of causes of death in patients who suffered perioperative myocardial infarction and in control group

Pt	Age/Sex	Surgery	POD-MI	POD Death	Cause of Death*
PMI group					
1.	63/M	AARS	0	1	Massive blood loss, hyperkalemia, severe hypotension
2.	74/F	PVS	5	5	Cardiogenic shock, dysrhythmia (ventricular)
3.	72/M	PVS	1	11	Cardiogenic shock
4.	84/F	PVS	1	3	Cardiogenic shock followed by asystole
5.	79/M	PVS	0	0	Hemodynamic instability, ventricular dysrhythmia, ventricular fibrillation
6.	65/M	AARS	0	1	Acute severe hypotension, cardiogenic shock, asystole
7.	69/M	TARS	0	1	Acute severe hypotension, cardiogenic shock
8.	80/F	PVS	1	2	Postoperative acute myocardial ischemia, cardiac arrest during unsuccessful PTCA
9.	72/M	AARS	0	0	Hypotension, ventricular fibrillation
10.	77/F	PVS	0	38	Dysrhythmia, CHF, MSOF
11.	69/M	TARS	0	1	Acute intraoperative hypotension, ECG c/w acute MI, postoperatively ARDS, ARF
12.	82/M	AARS	1	3	Acute hypotension requiring vasopressor support, ARDS
13.	72/M	PVS	1	33	Cardiogenic shock
14.	84/F	PVS	1	1	Cardiogenic shock
15.	68/M	CEA	1	5	Hypotension requiring vasoactive support
16.	68/M	AARS	1	18	Ventricular dysrhythmia, ARF, septic shock, gastrointestinal bleeding
17.	70/M	AARS	0	24	Intraoperative MI, urgent partially successful PTCA, postoperatively long-term mechanical (IABP) and vasopressor support, ARF, gastrointestinal bleeding
18.	72/M	PVS	3	3	Autopsy confirmed massive acute MI
19.	77/M	CEA	1	39	Cardiac dysrhythmia, severe hypotension, cardiac arrest
20.	73/M	TARS	0	2	Ventricular tachycardia, cardiogenic shock, asystole
21.	85/M	PVS	2	30	CHF after MI, long-term vasoactive support, sepsis
22.	76/M	AARS	1	45	Ventricular dysrhythmia, MSOF
Control Group					
1.	75/F	CEA	---	8	Sudden asystole without evidence of acute MI
2.	64/M	AARS	---	77	ARDS, wound dehiscence (steroid dependence for COPD), septicemia, ARF
3.	74/M	TARS	---	8	ARDS, cellulitis/fasciitis, sepsis, acute hemorrhage, shock
4.	73/F	PVS	---	19	ARF, acidosis, CHF (no evidence of MI)

*Description is based on terminology used in physicians' notes. F, female; M, male; Age (in years); POD-MI, postoperative day when myocardial infarction was diagnosed; MSOF, multisystem organ failure; CHF, congestive heart failure; IABP, intraaortic balloon pump, ARDS, adult respiratory distress syndrome; ARF, acute renal failure; PTCA, percutaneous transluminal coronary angioplasty; AARS abdominal aortic reconstructive surgery; TARS, thoracic aortic reconstructive surgery; PVS, peripheral vascular surgery.