

A RETROSPECTIVE STUDY OF DIABETIC CABG PATIENTS IN HAMPTON ROADS

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BACKGROUND

- CABG: Coronary artery bypass graft
- Cleveland Clinic study showed an increase of diabetics undergoing CABG from 7% in 1970's to 40% in 2010
- In Virginia- prevalence of diabetes increased from 5.1/100 in 1990's to 9.8/100 in 2012

OBJECTIVES

- To describe the characteristics of the diabetic CABG population in Hampton Roads
- Compare diabetic CABG patients to non-diabetic CABG patients
- Determine whether diabetes is a predictor for length of stay in the hospital
- Determine whether diabetes is a risk factor for post-op complications

STUDY POPULATION

- Samples obtained from VHI discharge reports
- Patients undergoing CABG between January 2010-August 2014
- 4773 total discharge reports
 - 2369 diabetics undergoing CABG
 - 2404 non-diabetics undergoing CABG
- Data pulled for 4 local hospitals that perform CABG
 - Sentara Norfolk General
 - Sentara Virginia Beach General
 - Bon Secours Maryview Medical Center
 - Riverside Regional Medical Center

RESULTS

Table 1: Statistical Analysis of Diabetic & Non-diabetic CABG Patients

	Total Population <i>Mean ±SD or n (%)</i>	Control Population <i>Mean ±SD or n (%)</i>	Study Population <i>Mean ±SD or n (%)</i>	P-value <i>(t-test or chisq)</i>
Number of Subjects, n	4773	2404	2369	
Hospital				
Sentara Norfolk General Hospital	3157 (66.1)	1530 (32.1)	1627 (34.1)	
Bon Secours Maryview Medical Center	421 (8.8)	230 (4.8)	191 (4.0)	
Riverside Regional Medical Center	749 (15.7)	420 (8.8)	329 (6.9)	
Sentara Virginia Beach General Hospital	446 (9.2)	224 (4.7)	222 (4.7)	
Age	65.2 ± 10.4	65.8 ± 10.9	64.7 ± 9.9	0.0002^a
Sex				
Male	3461 (72.5)	1815 (38.0)	1646 (34.5)	<0.0001^a
Female	1312 (27.5)	589 (12.3)	723 (15.2)	
Length of Stay	11.7 ± 9.0	12.6 ± 11.1	11.0 ± 7.0	<0.0001^a
Pre-Op	3.2 ± 4.1	3.2 ± 4.5	3.2 ± 3.7	
Post-Op	8.6 ± 7.8	9.4 (9.4)	7.9 ± 5.8	
Mortality/Expired				
No	4674 (97.9)	2344 (49.1)	2330 (48.8)	0.04^a
Yes	95 (2.1)	56 (1.2)	39 (0.9)	
Admit type				
Urgent/Emergency	3065 (64.2)	1516 (63.1)	1549 (65.4)	0.09
Non-Urgent/Non-Emergency	1708 (35.8)	888 (36.9)	820 (34.6)	
Patient Status				
Discharged to home self-care	1422 (29.8)	809 (17.0)	613 (12.8)	
Discharged w/ home health care	2297 (48.1)	1041 (21.8)	1256 (26.3)	
Total Charges	\$135132 ± 105117	\$146,944 ± 131955	\$123,145 ± 65667	

CONCLUSIONS

- Avg age of diabetics undergoing CABG is lower than that of non-diabetics
- Higher percentage of females in the diabetic group
- Longer LOS & higher rate of in-hospital mortality in non-diabetic patients

CONCLUSIONS

- No statistical difference in hospital complications between the two groups
- After adjusting for age, sex, complications and comorbidities, there was no difference in the LOS between the diabetic and non-diabetic CABG groups
- Cleveland Clinic and the effect of comorbidities on hospital complications and hospital death

LIMITATIONS

- Sample size
- Limitations of retrospective studies:
 - Missing data
 - ICD-9 Coding
- Differences/changes in hospital practices and protocols

FURTHER STUDIES

- Temporal trends
- Multiple comorbidities
- Compare prevalence of diabetes in CABG population in Hampton Roads to that of all diabetic CABG patients in VA
- Pre/post hospital protocol changes
- Readmissions

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References:

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THE END

Questions?