بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

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Systematic review & Meta-analysis of comparative study between saphenous vein and radial artery as a conduit in coronary artery bypass grafting surgery

THESIS
FOR PARTIAL FULFILMENT OF
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Dedication

To my father for his support.

To my mother for her ultimate care. I owe her everything.

To my brothers, my lovely wife, and my dear friends: thanks for being in my life.

CONTTENTS

ABSTRACT

Background & Objectives:

The modern coronary artery surgery has developed on the foundation of testing several grafts and an attempt to standardize them, which has brought along the beginning of evidence-based cardiac surgery.

Multiple conduits are used and the golden standard is the left internal mammary artery to the left anterior descending artery. While the choice of the 2nd conduit is still controversial.

The aim of this work is to compare by Meta-analysis study the difference between Radial Artery (RA) & Saphenous vein (SV) as second conduits in CABG regarding long-term patency, mortality & morbidity.

Subjects & Methods:

In this study, we included data from 15 cohort & case matched studies involving 78,267 patients in aggregate with a mean follow-up of 8.25 years. We made pairwise meta-analyses of our outcomes using Comprehensive Meta-Analysis software (CMA version 3.9).

Results:

In our study, we found that the using of saphenous vein during CABG had a higher complete graft occlusion/stenosis rate, myocardial infarction rate, mortality rate, stroke rate, major adverse cardiac events (MACE) rate than the using of Radial artery. While the using of radial artery during CABG had a higher patency rate, percutaneous coronary intervention rate, coronary surgery repetition rate than the using of saphenous vein

Conclusion:

These results indicate that the radial artery has long-term beneficial & improving post-operative outcomes rather than the saphenous vein.

Keywords: Coronary Artery Bypass, Saphenous vein, Radial artery.

List of Abbreviations

Abb.	Full term
A	Artery
ART	Arterial Revascularization Trial
BIMA	Bilateral internal mammary artery
BITA	Bilateral internal thoracicartery
BRM	Brachioradialis muscle
CABG	Coronary artery bypass graft
CAD	Coronary artery disease
CI	Confidence intervals
CMA	Comprehensive Meta-Analysis
COPD	Chronic obstructive pulmonary disease
CVH	Conventional vein harvesting
DES	Drug eluting stents
DSWI	Deep sternal wound infection
EVH	Endoscopic vein harvesting
FCRM	Flexor carpi radialis muscle
FRIMA	Free right internal thoracic artery
GEA	Gastroepiploic artery
GSV	Great saphenous vein
HCR	Hybrid coronary revascularization
ICTRP	International Clinical Trials Registry Platform
IRR	Incident rate ratio
ISI	International Scientific Indexing
IMA	Internal mammary artery

ITA	Internal thoracic artery
LABCN	Lateral antebrachial cutaneous nerve
LAD	Left Anterior descending **LIMA** Left internal mammary artery
LITA	Left internal thoracic artery
MABG	Multiple arterial coronary artery bypass graft
MACE	Major adverse cardiac events
MI	Myocardial infarction
MIDCAB	Minimally invasive direct coronary artery bypass grafting
mRCT	metaRegister of Controlled Trials
NHLBI	National Heart, Lung, and Blood Institute
NIH	National Institutes of Health
OR	Odds ratio
PCI	Percutaneous coronary intervention
PRISMA	Preferred reporting items for systematic reviews and meta-analysis
QA	Quality assessment
RA	Radial artery
RAPCO	Radial Artery Patency and Clinical Outcomes
RCA	Right coronary artery
RCT	Randomized control trial
RIMA	Right internal mammary artery
RITA	Right internal thoracic artery
RRA	Recurrent radial artery
SABG	Single arterial coronary artery bypass graft
SBT	Standard bridging technique
SIGLE	System for Information on Grey Literature in Europe

SPA	superficial palmar artery
SRN	superficial radial nerve
SV	Saphenous vein
SVG	Saphenous vein graft
TECAB	Totally endoscopic coronary artery bypass
US	United States
V	Vein
VHL	Virtual Health Library
Vs	Versus

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