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Transradial vs. Transfemoral Access for Percutaneous Coronary Intervention in STEMI: Meta-Analysis of Randomized Controlled Trials

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were all cause mortality, MI, stroke and repeat revascularization. Odds ratios (OR) and 95% Confidence Intervals (CI) were calculated. The analysis was performed using DerSimonian and Laird random effect model.

Results: In total, six studies (four observational and two randomized controlled trials) met our inclusion criteria with a total of 2198 patients (CABG: 1050, PCI: 1148). Patients undergoing CABG had a higher

incidence of multivessel disease (74.7% vs 65.7%, $p = 0.01$) At a mean follow-up of 3.4 +/- 1.1 years, the incidence of MACCE was significantly lower in CABG group as compared to PCI group (OR = 0.70, 95% CI = 0.57 – 0.87; $p = 0.001$) (Figure 1). The odds of MI or repeat revascularization were lower with CABG, whereas the odds of stroke were higher; no statistically significant difference was seen in all-cause mortality.

Conclusion: Our analysis shows that CABG is associated with better long-term outcomes as compared to PCI in LMCAD patients with CKD. ■

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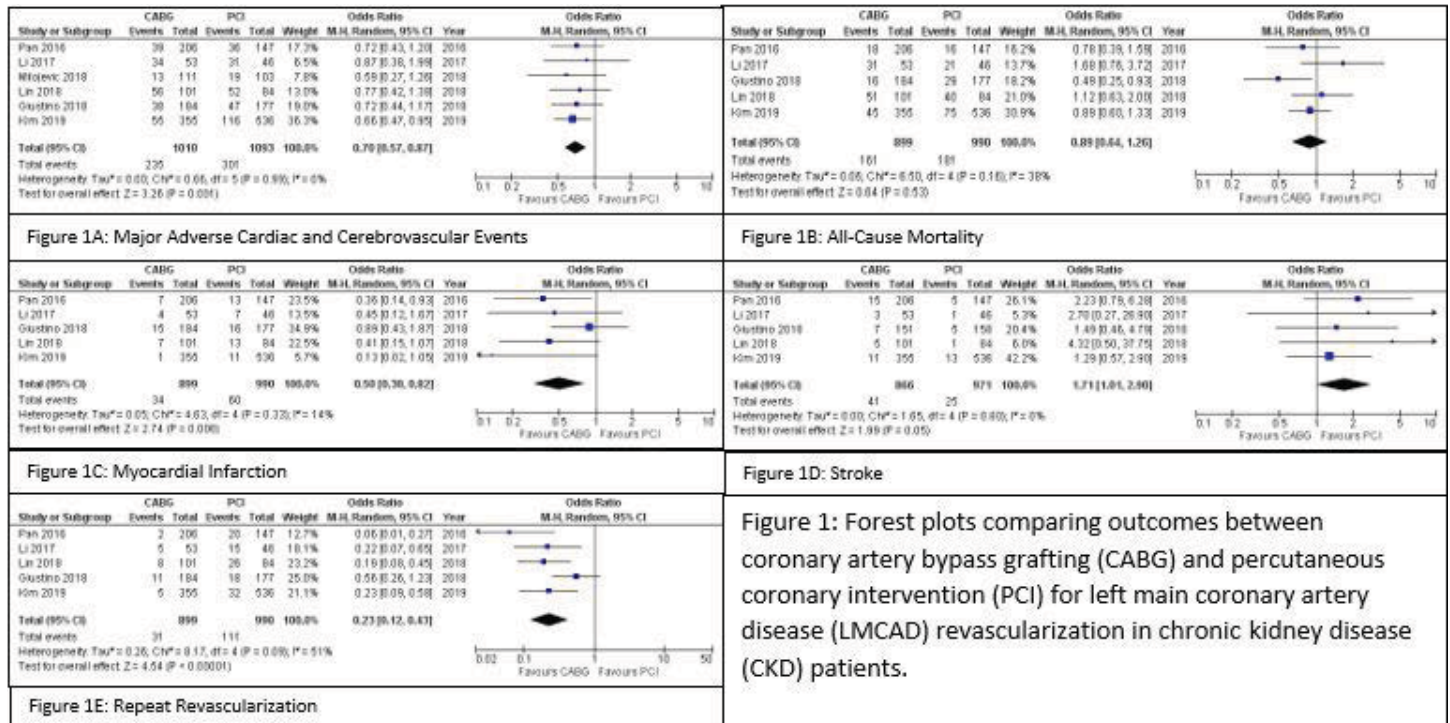


Figure 1. Forest plots comparing outcomes between CABG and PCI for LMCAD revascularization in CKD patients.

Transradial vs. Transfemoral Access for Percutaneous Coronary Intervention in STEMI: Meta-Analysis of Randomized Controlled Trials

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Mentor: Poonam Velagapudi

Program: Internal Medicine, Division of Cardiovascular Disease

Type: Review/Meta-analysis

Background: Transradial access (TRA) is now increasingly used for percutaneous coronary intervention (PCI) in ST Elevation Myocardial Infarction (STEMI) vis-à-vis Transfemoral access (TFA). We conducted a meta-analysis of randomized controlled trials

to evaluate the long term efficacy and safety of the two approaches in STEMI-PCI.

Methods: PubMed, Cochrane, Embase databases and major national conference proceedings were systematically searched for clinical trials comparing TRA and TFA in patients undergoing PCI for STEMI. Efficacy outcomes studied were all-cause mortality, major adverse cardiovascular events (MACE), myocardial infarction (MI) and stroke. Safety outcomes included major bleeding and

vascular complications. Odds ratios (OR) and 95 % Confidence Intervals (CI) were calculated. The analysis was performed using DerSimonian and Laird random effects model.

Results: In total, 17 trials met our inclusion criteria with a total of 12018 patients (TRA: 5958 and TFA: 6060). There was no statistically significant difference in procedure duration and fluoroscopy time among the two groups, however, hospital length of stay was significantly lower in the TRA group (Figure

1). At a mean follow-up of 2.3 +/- 2.8 months, rates of all-cause mortality (OR: 0.70, 95% CI = 0.56 – 0.88), major bleeding (OR: 0.58, 95% CI = 0.44 – 0.76) and vascular complications (OR: 0.38, 95% CI = 0.28 – 0.51) were lower in TRA as compared to TFA while there was

no difference in rates of MACE, MI and stroke between groups.

major bleeding and vascular complications in STEMI patients undergoing PCI. ■

Conclusion: Our analysis shows that TRA is associated with better long-term survival as compared to TFA along with lower rates of

<https://doi.org/10.32873/unmc.dc.gmerj.2.1.057>

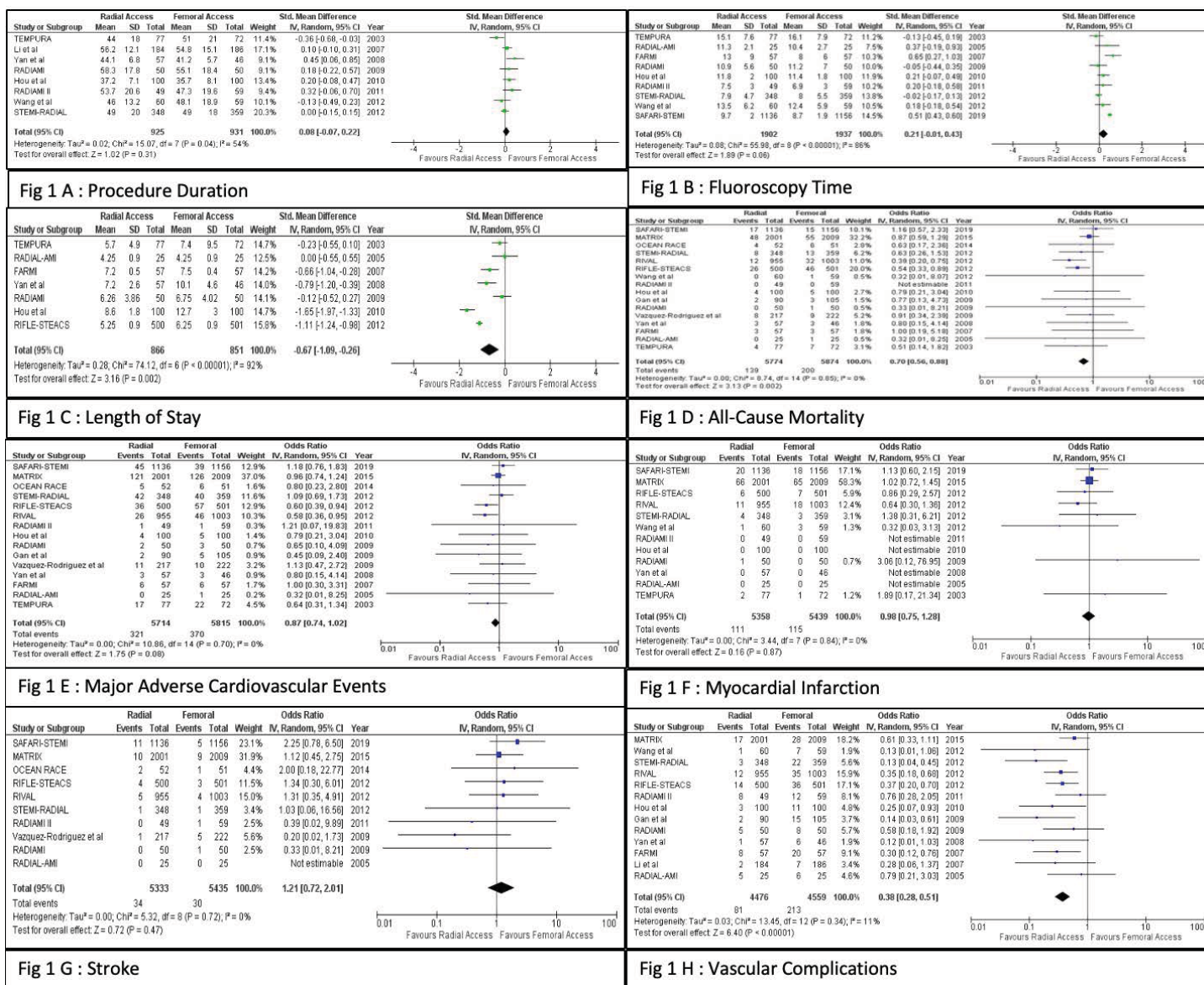


Figure 1. Forest plots showing outcomes with transradial and transfemoral approaches in STEMI.

Virchow's Triad in Action

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Mentor: Mark Mailliard

Program: Internal Medicine

Type: Case Report

Background: A 21 year-old man presented with a two-day history of left leg pain and

swelling following recent admission for non-traumatic splenic rupture due to presumed infectious mononucleosis. He had swelling, tenderness and erythema of the left lower extremity, primarily surrounding the calf. Doppler ultrasound revealed non-occlusive deep vein thrombosis (DTV) of the left

proximal femoral vein and he was started on apixaban for anticoagulation. Laboratory workup for clotting disorder revealed heterozygous Factor V Leiden mutation. One week later his leg pain and swelling worsened. Repeat Doppler revealed extensive progression of the DVT despite appropriate