



The 7th World Congress on
**Controversies to Consensus in Diabetes,
Obesity and Hypertension (CODHy)**
Sorrento, Italy April 11-13, 2019
www.codhy.com codhy@codhy.com

METFORMIN'S PLEIOTROPIC EFFECT OF IMPROVING ENDOTHELIAL FUNCTION IN HYPERTENSIVE AND PREDIABETIC SUBJECTS: A 3 MONTHS FOLLOW-UP STUDY

V. Astari

Department of Cardiology, Faculty of Medicine Universitas Riau, Indonesia

Background : The vascular effect of insulin resistance had been known to cause serious damage on endothelial function, especially nitric oxide (NO) system, that may cause an early onset of cardiovascular disease. **Objective :** To explore the pleiotropic effect of Metformin on improving endothelial function **Method and Results :** A quasi experimental study of 62 hypertensive and pre-diabetic (IGT) patients showed a significant improvement of Flow Mediated Dilatation (FMD) within 3 months in those who received added therapy of Metformin 500 mg twice daily (n=23) on their routine anti-hypertensive drugs (p0,001). It also showed a moderate correlation between improvement of FMD that reflects the endothelial function with good achievement of targeted blood pressure (R 0,421). Linear regression analysis (adjusted analysis to confounder factors such as age, sex, BMI, history of smoking, aspilet added therapy, anti-hypertensive drugs) showed Metformin as the only factor that influenced the improvement FMD (OR 7,88; p0,001). **Conclusion :** This study showed that Metformin 2x500 mg as an add-on therapy in hypertensive pre-diabetic subject plays a positive role in improving the endothelial function as seen on the FMD measurement
Key words: Impaired Glucose Tolerance, Flow Mediated Dilatation, Metformin



www.comtecint.com

Headquarters and Administration:

3 Rothschild Boulevard
PO Box 68
Tel Aviv 61000, Israel
Tel: +972-3-5666166
Fax: +972-3-5666177
Email: info@comtecmed.com

Comtec Spain:

Bailén, 95-97
prat. I. a - 08009
Barcelona, Spain
Tel: +34-93-2081145
Fax: +34-93-4579291
Email: spain@comtecmed.com

Comtec China:

Suite 504, Universal Center Building
175 Xiang Yang Road South
Shanghai 200031, China
Tel: +86-21-54660460
Fax: +86-21-54660450
Email: china@comtecmed.com