

THE EFFECTS OF CURCUMIN AND ACETYLSALICYLIC ACID TO ARTERIOVENOUS FISTULA MATURATION IN END-STAGE RENAL DISEASE PATIENTS WITH DIABETES MELLITUS

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ABSTRACT

Background: *The study of diabetic arteriovenous fistula (AVF) in end-stage renal disease is essential in order to know on how to maintain the AVF in good function. We studied to support the AVF using Curcumin, Acetylsalicylic acid, and Placebo.*

Methods: *This is a randomized, parallel, placebo-controlled, double-blinded, clinical trial involving 65 patients with diabetes mellitus type-2 who underwent brachiocephalic shunt in the left or right cubital fossa. The patients were divided into three groups, namely curcumin group (n = 23), acetylsalicylic acid group (n = 21), and placebo group (n = 21). The statistical analysis was performed using SPSS version 25. All statistical tests were two-tailed, and a p-value < 0.05 was considered significant.*

Results: *After 4 weeks of treatment: the AVF maturation of Curcumin versus Placebo (26.1 % vs. 23.8 %), Acetylsalicylic acid versus Placebo (42.9 % vs. 23.8 %), Curcumin vs. Acetylsalicylic acid (26.1 % vs. 42.9 %). Statistically, no significant difference was found in maturation and draining vein diameter. Draining vein Intimal-Media Thickness (IMT) in Curcumin group is significantly better than other groups (p=0.003) after 8 weeks.*

After eight weeks of treatment, the AVF maturation treated by the Curcumin has a higher percentage of maturation (82.6 %) versus Placebo (57.1 %), p=0.099, but the Curcuma (82.6.1 %) noted had a significant difference with Acetylsalicylic acid (71.4 %) (p = 0.481). A significant difference in draining vein diameter was noted between the Curcumin vs. Placebo (p<0.05), but Curcumin vs. Acetylsalicylic acid was not significant (p = 0.481).

Conclusions: *Daily high dose curcumin was able to increase draining vein diameter, and a higher maturation rate. However, there is no significant difference in all of the maturation parameters between the Curcumin and Acetylsalicylic.*

KEYWORDS: *Curcumin, Acetylsalicylic Acid, Arteriovenous Fistula Maturation, End-Stage Kidney Disease, Diabetes Mellitus*

Article History

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