



QUALITY OF LIFE, QUALITY OF CARE, AND PATIENT SAFETY

A RANDOMIZED CONTROLLED TRIAL OF LACTOBACILLUS PLANTARUM IS-10506 SUPPLEMENTATION FOR ATOPIC DERMATITIS IN ADULTS: EFFECTS ON QUALITY OF LIFE

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Introduction: Atopic dermatitis (AD) is a chronic recurrent inflammatory dermatosis characterized by moderate to intense pruritus. AD affects the quality of life (QoL) in social, emotional, and financial aspects. Lactobacillus plantarum IS-10506 is a novel probiotic isolated from dadih, an Indonesian traditional fermented buffalo milk. L. plantarum IS-10506 was found to alleviate symptoms and enhance QoL in patients with AD.

Objective: To assess QoL and Scoring Atopic Dermatitis Index (SCORAD) after supplementation of L. plantarum IS-10506 and correlation between QoL and SCORAD in adults with mild and moderate AD.

Materials and Methods: A randomized controlled trial comparing microencapsulated L. plantarum IS-10506 (1010 cfu/day) and placebo (skim milk-Avicel) twice daily for 8 weeks was given to adults with mild and moderate AD. The trial consisted of 30 samples divided into intervention (n=15) and control groups (n=15). QoL and SCORAD using Patient Oriented Eczema Measurement (POEM) were assessed.

Results: QoL were significantly higher in the probiotic group than those in the placebo group on the 8th week (p 0.000). Moreover, QoL were increased along with the decreased of SCORAD after 8 week of supplementation $r=0.434$ (p 0.17). SCORAD scored lower significantly in the probiotic group than those in the placebo group on the 4th week (p 0.040) and 8th week (p 0.022). On the 4th week, SCORAD on probiotic group decreased to $17,20 \pm 6,79$ and on the 8th decreased to $9,61 \pm 2,55$.

Conclusions: L. plantarum IS-10506 has beneficial effects to symptoms and QoL in adults with mild and moderate AD. Probiotic L. plantarum IS-10506 supplementation offers a potential treatment for AD in adults. Further long-term studies with a larger sample sizes are





necessary to obtain therapeutic efficacy of *L. plantarum* IS-10506 in AD.

