



ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

ACNE VULGARIS PATIENTS HAVE SIGNIFICANTLY ALTERED GUT MICROBIOTA AND MICROBIAL METABOLITES IN ADOLESCENT

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Introduction: Few studies has been conducted to explain the possibly separated pathogenesis of acne for different age groups from dysbiosis of intestinal microbiota.

Objective: This study was designed to investigate the discrepancies of gut microbes and associated metabolites in adolescent and adult acne patients, compared with healthy controls.

Methods: Fecal samples were obtained from 43 acne vulagris patients and 43 age- and gender-matched healthy controls, by using hypervariable tag sequencing of the V3-V4 region of the 16S rRNA gene. Targeted quantitative analysis of 145 gut microbiome metabolites was also performed on MicrobioMET platform.

Results: α -diversity showed less diversity of gut microbiota in both adolescent and young adult patients than that in matched healthy controls. Microbiome and metabolism differed significantly in healthy subjects from adolescent to youg adults. Adolescent acne patients had significantly altered microbiome and metabolites compared with their matched healthy controls, however no interstinal microbes were found in adult acne differed from that in adult healthy controls.

Results: Our findings may help explain different pathogenesis of acne vulgaris in adolescents and young adults, and provide potential therapeutic targets of the disease.

