Probiotics in septic acute kidney injury, a double blind, randomized control trial

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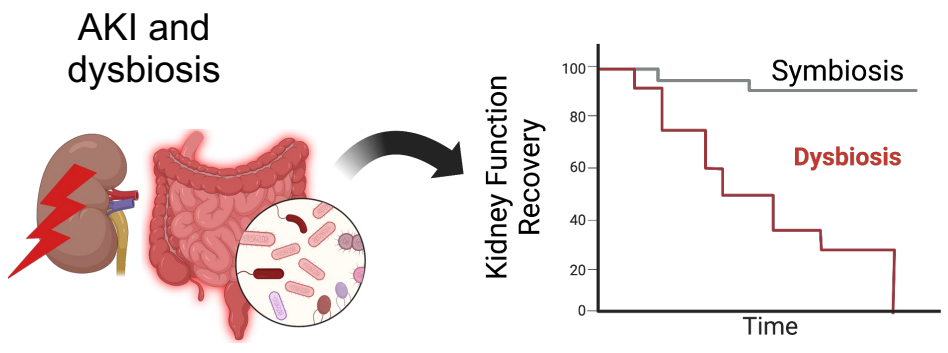
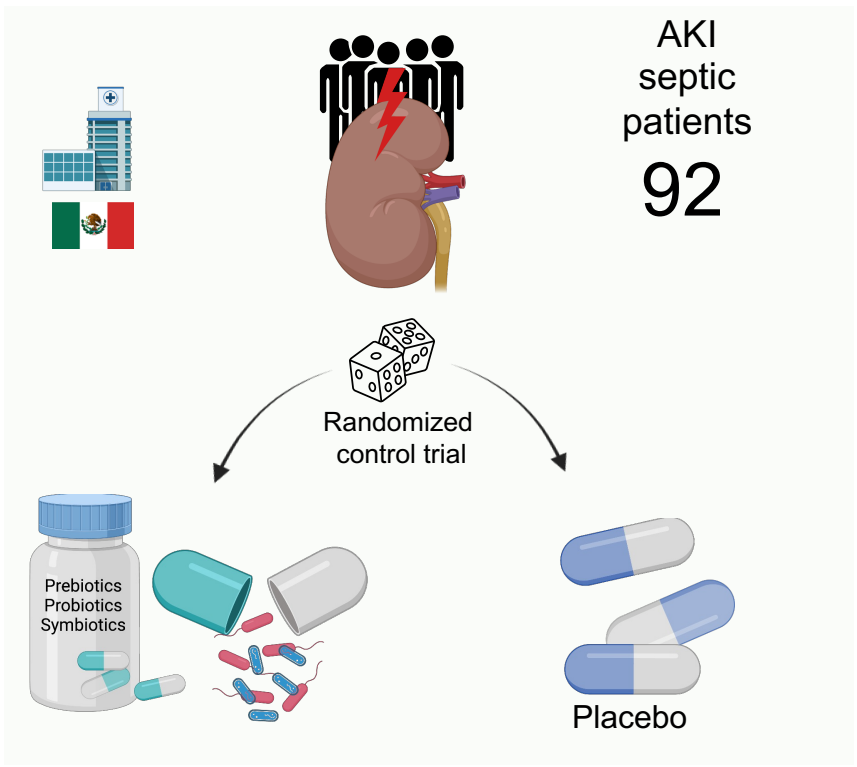
Introduction

During AKI dysbiosis can coexist, this combination is associated with worse clinical evolution



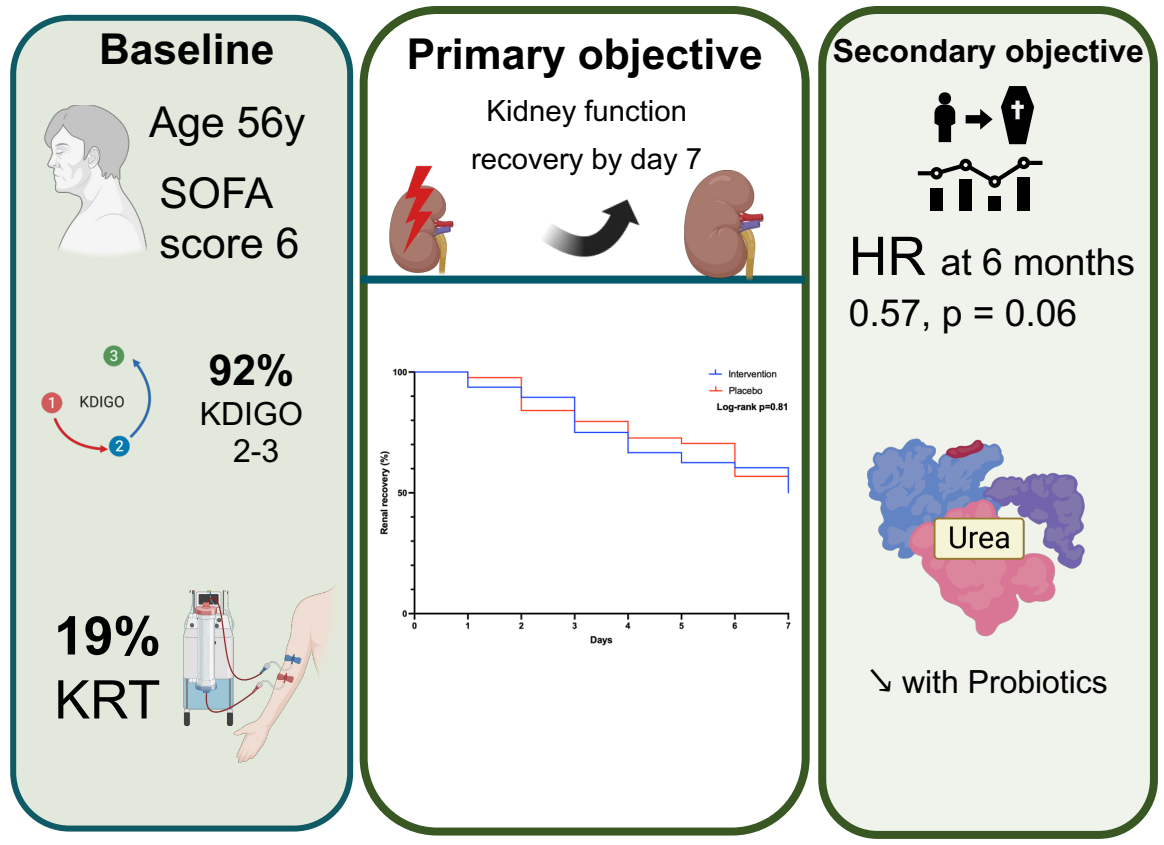
Methods and Materials

In this double-blind clinical trial, patients with sepsis-induced AKI were randomized to receive probiotics or placebo for 7 days. The primary outcome was the rate of KFR by day 7. Secondary outcomes were mortality, kidney replacement therapy (KRT) requirements, urea reduction, modifications in urine volume, electrolyte abnormalities and treatment related adverse events



Results

A total of 92 patients from February 2019 to March 2022 were randomized, 48 to probiotics and 44 to placebo. Compared to placebo, probiotics did not improve KFR by day 7(HR 0.93, 0.52-1.68, p = 0.81), mortality hazard ratio at 6 months was 0.57 (95%CI 0.32-1.04, p = 0.06). Urea (mg/dL) decreased significantly in the probiotic group from 154 to 80 mg/dl (p = 0.04) as compared to the placebo group (130 to 109 mg/dl (p=0.09). No significant differences were observed with respect to urinary volume, KRT requirement and electrolytes abnormalities. Adverse events were frequent and similar in both groups. (ClinicalTrial.gov NCT03877081)



Conclusions

In septic-induced AKI, administration of probiotics for 7 days was safe; however, they did not improve KFR or reduce mortality

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