



Effects of *Chimonanthus salicifolius* Flavone on Inflammatory Factor and Intestinal Flora Changes in Mice Induced by Ampicillin

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SUMMARY. This study aimed to investigate the effects of *Chimonanthus salicifolius* flavone (CSF) on inflammatory factor and intestinal flora changes in mice induced by ampicillin. CSF was prepared. Sixty mice were randomly divided into normal, model, 50, 100 and 150 mg/kg CSF and *Bifidobacterium* groups, 10 mice in each group. The mice in latter five groups were given 3 g/kg ampicillin for 14 days. From the 8th day, the 50, 100, and 150 mg/kg CSF were daily given 50, 100, and 150 mg/kg CSF by gavage, respectively. The *Bifidobacterium* group was daily given 2 mg/kg *Bifidobacterium* (1×10^9 CFU) by gavage. Results showed that, on the 14th day, compared with model group, in 150 mg/kg CSF group the TNF- α , IL-6, and IL-1 β levels were significantly decreased, and the IL-10 level was significantly increased; the Ace, Chao and Shannon indexes of intestinal flora were significantly increased, and Simpon index was significantly decreased; the Uni Frac distance in colonic flora was small; the relative abundance of *Klebsiella* in intestinal flora was decreased, and that of *Akkermansia* and *Bacteroides* were increased. In conclusion, CSF can regulate the intestinal flora imbalance and inflammatory factor abnormality induced by antibiotics in mice.

RESUMEN. El objetivo de este estudio fue investigar los efectos de la flavona de *Chimonanthus salicifolius* (CSF) sobre los factores inflamatorios inducidos por ampicilina y la flora intestinal en ratones. Se preparó un CSF con una pureza del 97,63%. Sesenta ratones fueron divididos aleatoriamente en grupo normal, grupo modelo, grupo LCR 50, 100, 150 mg/kg y grupo *Bifidobacterium*, cada uno con 10 ratones. Los últimos 5 grupos recibieron 3 g/kg de ampicilina durante 14 días. A partir del octavo día, 50, 100 y 150 mg/kg de líquido cefalorraquídeo se administraron diariamente. Al grupo *Bifidobacterium* se le administró diariamente 2 mg/kg de *Bifidobacterium* (1×10^9 UFC). Los resultados mostraron que, en comparación con el grupo modelo, los niveles de TNF- α , IL-6, IL-1 β y IL-10 en el Grupo CSF de 150 mg/kg disminuyeron significativamente en el día 14, y los índices de flora intestinal como ACE, Chao y Shannon aumentaron significativamente, mientras que el índice Simpon disminuyó significativamente. La abundancia relativa de *Klebsiella* en la flora intestinal disminuyó, mientras que la abundancia relativa de *Akkermansia* y *Bacteroides* aumentó. En conclusión, el LCR puede regular la alteración de la flora intestinal y los factores inflamatorios inducidos por antibióticos en ratones.

KEY WORDS: ampicillin, *Chimonanthus salicifolius*, flavone, inflammatory, intestinal flora.

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