

黃芩苷與黃芩素用於治療幽門螺旋桿菌感染之功效

Study of baicalin and baicalein in treating *Helicobacter pylori* infection

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Helicobacter pylori infection is associated with chronic gastritis, peptic ulcers, and gastric cancer. About 50% of the population in the world is infected by *H. pylori*. Furthermore, 70% to 95% of *H. pylori*-infected patients are suffering from peptic ulcer. *Scutellaria baicalensis Georgi* is one of a common Chinese herb, and its major compounds are baicalin and baicalein. It has showed that both baicalein and baicalin harbored antibacterial activities. Baicalein, a primary metabolite of baicalin, differs from its mother compound merely by the 7-substituent (i.e. it possesses a phenolic hydroxyl (7-OH) instead of a glucuronic acid). In our study, baicalein exhibited stronger bactericidal activity than baicalin did. But baicalein also exhibited stronger cytotoxicity than baicalin did in AGS (human gastric cancer epithelial cell lines). It could also interfere the adhesion and invasion ability of *H. pylori* to epithelial cells and decrease *H. pylori*-induced IL-8 expression. Therefore, baicalein showed a better therapeutic ability than baicalin. Additionally, a mice infection model was established. Infected mice were treated with different amount of baicalin, baicalein and antibiotics for three days. Baicalin and baicalein could inhibit *H. pylori* growth in stomach and suppress VacA expression, which toxin causes progressive vacuolation as well as gastric injury. Moreover, *H. pylori* – specific IgM and IgA levels in mice treated with baicalein and antibiotics were decreased. Antibiotic treatment disturbed intestinal microflora, but baicalin and baicalein did not. These treatments could not only provide a new treatment of *H. pylori* infection and also overcome the problem that antibiotic treatment caused by disturbing the proper function of the intestinal flora.

Keywords: baicalin, baicalein, *Helicobacter pylori*