

Medicinal plants from Thailand for *Helicobacter pylori* infections. (Oral Presentation)

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Introduction

For thousands of years medicinal plants have played a significant role in the treatment of a wide range of medical conditions, including infectious diseases (Mahady et al 2006). In Thailand, traditional plant-based medicines have always been used to treat gastrointestinal ailments, including gastritis, peptic ulcer disease (PUF) and diarrhea (Bhamarapravati et al 2003). Since the discovery of *Helicobacter pylori* (HP) as the etiological agent of PUD, we have assessed many plant extracts as potential treatments for HP infections, including over 25 species from Thailand used in Traditional Thai Medicine (TTM) for the treatment of gastrointestinal ailments.

Objectives

In vitro and in vivo testing of medicinal plant species from Thailand used traditionally for gastrointestinal ailments to determine their efficacy against *Helicobacter pylori*.

Methods

International Memorandum of Agreement were established between UIC and Mahidol University in Thailand. Medicinal plants were collected, identified and extracted. Susceptibility testing were performed in 15 HP strains using the agar dilution procedure guidelines of the Clinical and Laboratory Standards Institute (CLSI) (NCCLS 2003, CLSI/NCCLS 2005). *in vivo* studies included evaluating dose-response and treatment periods on bacterial load, as well as acute and chronic inflammation in HP-infected Mongolian gerbils.

Results

Extracts of ginger, turmeric, and *Boesenbergia rotunda* reduced HP-induced gastric lesions, as assessed both macroscopically and microscopically in *Mongolian gerbils*. The treatments reduced acute and/or chronic inflammation in a prevention model of HP-induced gastritis. With the exception of ginger, there was no significant difference in bacterial load.

Conclusions

Extracts from plants used in Traditional Thai medicine inhibited the growth of HP in vitro, reduced acute and chronic inflammatory parameters when administered to HP-infected Mongolian gerbils. These data support the use of these medicinal plants for the symptomatic treatment of HP infections and further support their chemopreventative activities.

Key Words: peptic ulcer disease, *Mongolian gerbil*, chemoprevention

Selected references

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