Bei Sha Shen

Introduction
Radix glehniae is the dried root of Glehnia littoralis Fr. Schmidt ex Miq. (Fam. Umbelliferae). The drug is collected in summer and autumn, removed from rootlet, washed clean, dried slightly in the air, treated with boiling water, peeled and dried, or dried immediately directly after washing.

Western medical
The herb is indicated in the treatment of pneumonia, mouth ulcer, hoarse voice, esophagitis, etc.

Eastern medical
Pattern: Nourishes yin, clears the Lung, benefits the Stomach and generates Fluid.
Properties: Sweet, slightly bitter, slightly cold.
Channels entered: Lung and Stomach.

Chemical constituents
The herb contains alkaloids, starch and polysaccharide, etc.
Pharmacological actions

• Anti-febrile and analgesic effects
Ethanol extract of the root could slightly lower the body temperature of normal rabbits, it could also lower the temperature of rabbits with fever induced by typhoid vaccine. Besides, it had analgesic effect on pain reaction caused by electric stimulation on dental pulp of rabbits.

Effects on cardiovascular system
Water immersion at low concentration could strengthen the contraction of isolated toad’s heart; with the increasing of concentration, it showed inhibitory effect till the ventricle stopped beating (meanwhile the atrium may still beat) which could be restored. It had similar effects on in vivo toad’s heart. Intravenous injection to anaesthetized rabbits could slightly increase the blood pressure and strengthen the respiration.

Others
• Polysaccharide of bei sha shen had immunosuppressive activity.
• Has antibacterial and antifungal properties, which include two hitherto unreported polyine compounds, (9Z)1,9-heptadecadiene-4,6-diyne-3,8,11-triol and (10E)1,10-heptadecadiene-4,6-diyne-3,8,9-triol.
• The anti-inflammatory properties of the methylene chloride fraction (MCF) of Glehnia littoralis extract (GLE), may result from the inhibition of pro-inflammatory mediators, such as NO, PGE(2), TNF-alpha, and IL-1beta via suppression of NF-kappaB-
and mitogen-activated protein kinases-dependent pathways.

• *G. littoralis* is an effective anti-inflammatory agent in murine phorbol ester-induced dermatitis and may have therapeutic potential in a variety of immune-related cutaneous diseases.

**Clinical Studies**

• Infantile persistent pneumonia
  bei sha shen and shan yao, 15g each were decocted to treat 24 cases of infantile persistent pneumonia whose courses varied from 1 to 3 months. Results: In 12 cases, main symptoms and signs disappeared and had no recurrence; in 9 cases, symptoms and signs disappeared; and 3 cases were ineffective.
  
• Esophagitis
  sha shen, mai dong, gan cao, jie geng, jin yin hua, lian qiao 100g each and pang da hai 50g were made into honey pills, 1~2 pills, 3~5 times daily. 12 cases were treated, 8 were cured, 3 improved and 1 ineffective.
  
• Infantile oral ulcer
  Sha Shen Mai Dong Tang (sha shen, mai dong, yu zhu, tian hua fen, bian dou, 6~9g each; dong sang ye 6g; gan cao 3~6g; da qing ye, ren zhong bai, 9~12g), water decoction, 1 dose every day. 34 cases of infantile mouth ulcer were treated and all were cured. The ulcer usually healed after 2~5 doses, averagely 2
doses.

- Hoarse voice

sha shen, shi gao 15g, gan cao 9g, xing ren, mi zhi pi pa ye, 10g each; e jiao, mai dong, hei zhi ma, dong sang ye, mu hu die, 12g each. Modify the formula according to accompanied symptoms. 85 cases of hoarseness were treated, and all were cured except one effective.

References


Yoon T, Cheon MS, Lee AY, Lee do Y, Moon BC, Chun JM, Choo BK, Kim HK. Anti-inflammatory activity of methylene chloride fraction from Glehnia