Chapter 20

Licorice

Michael Newton and Melanie Johns Cupp


20.1 History and Traditional Uses

Licorice is harvested from the roots of Glycyrrhiza glabra, a 4–5 ft shrub found in subtropical climates with rich soil (Anonymous, 1998). The plant is native to Greece, Turkey, Spain, Iraq, Caucasian and Transcaspian Russia, and northern China (Davis and Morris, 1991). Its use dates back thousands of years to ancient Egyptian rituals that enabled the spirits of pharaohs to prepare a sweet drink known as mai sus in the afterlife. A beverage called mai sus is still consumed today as an iced beverage in Egypt. Theophrastus, an ancient Greek botanist, referred in his writings to the ability of licorice to treat asthma and heal wounds. In writings from the first century BC, licorice was purported to abate hunger and thirst, clear the voice, heal sores of the mouth and genitals, and treat kidney and bladder ailments. Western herbalists recognized licorice as a remedy for “dropsy,” as did Pliny, and asserted that the root had emollient, demulcent, expectorant, and diuretic effects. Licorice was probably introduced to Native Americans by the early English settlers, and was subsequently used by medicine men to treat diabetes. In traditional Chinese medicine licorice was considered to benefit all organs of the body.

20.2 Current Promoted Uses

Today, licorice is employed in many capacities around the world. In China, licorice is used to treat a variety of symptoms and diseases, including Addison’s
disease (Davis and Morris, 1997), sore throats, carbuncles, diarrhea due to “spleen deficiency,” thirst due to “stomach deficiency,” cough due to “dry lungs,” and palpitations (Blumenthal, 1997). Other modern uses include bronchitis and other “catarrhal conditions,” gastritis, colic, arthritis, and hepatitis (Blumenthal, 1997). Licorice contains the natural sweetener glycyrrhizic acid (Gunnarsdottir and Johannesson, 1997), and is used to flavor soy sauce in China and Japan (Davis and Morris, 1991).

In the United States, licorice is used to cure and flavor tobacco products. Most licorice-flavored candies and other products in the United States today actually contain anethole from the aniseed plant as a substitute for licorice (Davis and Morris, 1991); however, licorice may still be found in some imported confections, gums, cough mixtures and lozenges, and Belgian beers (De Klerk et al., 1997).

20.3 Products Available

Aside from its use as a flavoring, licorice root can be found in some herbal supplements, usually those touted for their antiinflammatory effects. One product, for example, contains licorice root and several other “natural” substances such as shark cartilage, and is promoted to meet the complex nutritional needs of the musculoskeletal system. Another product utilizing licorice in combination with other herbal components claims to increase production of digestive juices, thereby reducing gas, cramping, bloating, upset stomach, heartburn, and nausea.

Licorice may also be found in herbal teas. For example, one tea product is touted as a “women’s tonic,” and in addition to licorice contains dong quai, astragalus, and ginseng to “combat stress, nourish the adrenals, pancreas, liver, and endocrine system.” The tea manufacturer also claims that their product helps with hormonal balance and relief of premenstrual syndrome.

20.4 Pharmacologic/Toxicologic Effects

20.4.1 Respiratory Effects

Licorice has often been touted as an expectorant and cough suppressant. Extracts of licorice are found in herbal cough mixtures and cough drops in Europe (De Klerk et al., 1997). However, literature supporting these claims is lacking.

20.4.2 Anti-Inflammatory Effects

Some components of licorice may have anti-inflammatory effects. One such component is glycyrrhetinic acid, a metabolite of glycyrrhizin (glycyrrhizic acid),