

Cortex Eucommiae Ulmoidis (Du Zhong) and Latex Allergy

Bob Flaws, LAc, FNAAOM (USA), FRCHM (UK)

In an article titled "Allergic to Latex? That's Probably Not All," Sara Latta writes that allergic reactions to latex proteins have risen sharply over the last 15 years.¹ Commercial latex comes from *hevea brasiliensis*, the rubber tree. This tree is from the family *euphorbiaceae* and now grows in tropical regions around the world. Natural rubber comes from the elastomers, "which consist of solids suspended in a milky fluid, called latex, that circulates in the inner portions of the bark of many tropical and subtropical trees and shrubs."² (Italics mine) As the authors of the *Encyclopedia Britannica* go on to say, other trees, shrubs and herbaceous plants produce rubber, just not as efficiently as *hevea brasiliensis*.

According to Diana Swift, in an article titled "Kiwis Can Caution Against Latex Allergy," 1-6.7% of the general population is allergic to latex, while an additional 20% are latex sensitive. Among health professionals, latex sensitivity and/or allergy ranges from 3-17%.³ While the majority of latex allergy sufferers are women,⁴ children are also especially at risk, as are people with allergic rhinitis or other allergies.⁵ In fact, people with food allergies, especially allergies to bananas, kiwi fruit, avocados, chestnuts, and stone fruits such as cherries and plums, run a ten-fold risk of developing latex sensitivity, according to Yale University anesthesiologist Dr. Jonathan Katz.⁶ Within *hevea brasiliensis*, any of 12 defensive proteins may cause allergies in humans. Again, as Steve Kagen, MD, director of the Kagen Allergy Clinic in Appleton, Wisconsin points out, these proteins are "produced by a variety of other plants as well."⁷ These proteins cause an immune system reaction mediated by antibody immunoglobulin E (IgE).

The rubber tree is not considered a medicinal within standard professional Chinese medicine. However, *eucommia ulmoides* is, and one of this tree's common English names is hardy rubber tree.⁸ This is due to two facts. First, it is the only type of "rubber tree" that can grow in such temperate climates as England and the U.S. Second, its sap does contain natural rubber elastomers or latex. As the authors of the Bushnell park website write, "At one time, people thought that the long, pointed leaves of this tree might be harvested to produce commercial rubber, but the amount of latex in them is very small."⁹

Perhaps those people should have looked at the bark, not the leaves. In Chinese medicine, the part of *eucommia ulmoides* used medicinally is the bark. This is referred to as *cortex eucommiae ulmoidis (du zhong)* within the Western practice of Chinese medicine. This medicinal comes in flattened pieces of grey-brown bark that have been cut into small strips almost all the way, but not quite through. These small strips are held together by a stretchy, silver-white substance at the base of the bark that looks like rubber and does contain latex. In fact, the way Chinese pharmacists determine good quality *du zhong* is by seeing how much and how elastic this springy, rubbery substance is. Hence, the peculiar manner of cutting *du zhong* within the Chinese pharmaceutical

trade is both a way of determining quality and a way of insuring maximum dissolution of this medicinal's active ingredients when decocted in water or tinctured in alcohol. This is the only Chinese medicinal of which I know that is prepared for sale and dispensation this way.

Within Chinese medicine, *du zhong* is categorized as a yang supplement that nourishes liver blood; invigorates kidney yang; moves the *qi* and quickens the blood; strengthens the sinews and bones; secures the fetus; and stops (low back) pain. According to the authors of an online advertisement for *du zhong cha* (cortex eucommiae tea), a decoction of this medicinal "is the drink needed by the busy working man, it does not contain caffeine and *will not cause side effect(s)*."¹⁰ (Italics mine) While it is true that within the Chinese medical literature, there are no particular side-effects and few contraindications listed for this medicinal,¹¹ to say that it is free from side-effects may not be correct, especially with Western patients. I was first introduced to the idea that *du zhong* contains latex and, therefore, may be allergenic in a certain percentage of patients several years ago by the Belgium Chinese medical teacher and author, Francois Ramakers. At the time, I did not give this new piece of information much credence since, to the best of my knowledge, I had never had a patient with a bad reaction to this medicinal. However, Ramakers assured me that he and other European Chinese medical practitioners had.

The issue of multiple allergic sensitivities is a growing concern within the practice of medicine in the West. It appears that the incidence of allergies of all kinds is growing. More than 50 million Americans suffer from various types of allergies. That means one out of five people! One out of every 11 office visits to a doctor is for some sort of allergy. Between 17-25% of the U.S. population suffers from allergic rhinitis. In fact, allergic rhinitis is the single most common disease experienced by Americans.¹² It is now also well-known that people who are allergic to a wide variety of foods also have a higher incidence of allergy to latex. According to Sara Latta, people who are allergic to any of the following foods have a higher than average probability of being allergic to latex, since all of them contain proteins similar to the allergic ones in lates: avocados; bananas; chestnuts; kiwis; raw potatoes; tomatoes; stone fruits such as peaches, plums, cherries and apricots; hazelnuts; melons; celery; carrots; apples; pears; papayas; almonds; peanuts; ginger; oregano; sage; dill; peppers; citrus fruits; coconuts; pineapples; mangos; figs; passion fruit; and ugli fruit.¹³ Typical allergic responses to the foods on this list include an itchy or tingling feeling in mouth; hives; difficulty breathing; headaches; or gastrointestinal symptoms. Therefore, I now believe that *du zhong* should only be prescribed with care to patients with either multiple food allergies (especially to any of the foods on the above list) or multiple chemical sensitivities (especially sensitivity or allergy to latex).

Latta also suggests two other ways of determining if one might be allergic to latex. If either of these ways tests positive, I also recommend avoiding or only using *du zhong* with care. These are:

1. Itchy feelings around any areas that have come into contact with latex, such as the penis or vagina after condom use; vaginal itching after a gynecological exam or procedure; or an itchy mouth or tingling in the mouth after a trip to the dentist;
2. Nasal congestion, hives, and/or difficulty breathing after inhaling latex powder.

In terms of Western patients with food allergies and multiple chemical sensitivities, the most common combination of Chinese medicinal patterns I see is spleen vacuity, liver depression, and dampness or damp heat and possible deep-lying phlegm. Depending on age and sex (e.g., children of both sexes below 16 and females above 40), spleen *qi* vacuity is often complicated by kidney yang vacuity. Since spleen vacuity may lead to insufficient blood engenderment and yin and yang are mutually rooted, spleen *qi* and kidney yang vacuity are also commonly complicated by liver blood vacuity. In addition, damp heat in the lower burner is itself a cause of liver-kidney damage.

Therefore, it is not at all uncommon to see patients with multiple food allergies or chemical sensitivities who might otherwise be prescribed *du zhong* according to the prescriptive methodology of professional Chinese medicine. If one feels sure of their pattern discrimination and their Chinese medicinal formula based on that pattern discrimination, yet the patient develops typical signs and symptoms of an allergic reaction in response to taking that formula, the first thing I recommend is taking out *du zhong* if it's in the formula and seeing if the allergic reactions go away. In my experience, the incidence of allergies is much higher in Western patients than in Chinese patients in China. Therefore, one must make adjustments in practice from one population to the other. I now believe considering *du zhong* as a potential allergen is one of these adjustments.

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