



Sumac Can Be Offered as an Alternative Treatment for Controlling Abnormal Bleedings Based on Persian Medicine

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Dear editor-in-chief;

Sumac (*Rhus coriaria* L., *Anacardiaceae* family), a popular herb aspices of flowering [1,2], contains some phytochemical constituent including anthocyanins, terpenes, phenolic acids, tannins, vitamins, minerals, and fatty acids [3,4]. Persian medicine (PM) has considered Cold and dry temperament as well as astringent and tonic properties for Sumac [5]. In addition, ancient Persians used Sumac to reduce the symptoms of motion sickness such as nausea and vomiting on sea traveling. They believed that the astringent and tonic effect of sumac prevents the stimulation of some materials in stomach, which can trigger motion sickness [5,6]. It is used for topical application to reduce the swelling and pain [5].

In Persian medicine (PM), Sumac has been mostly prescribed for reinforcement of stomach and gums, bloody diarrhea, infectious, severe uterine bleeding, and gout [7]. Likewise, recent studies confirmed its traditional antidiarrheal,

antimicrobial, anti-gastrointestinal ulcer and anti-gout and analgesic effect of Sumac via both peripheral and central mechanisms [8-10]. Also, the previous studies have reported its anti-cancer, cardioprotective, hypercholesterolemia, and anti-diabetes effects [11].

Ancient Persian physicians were familiar with the antibacterial effect of Sumac. They were prescribing topical washing with Sumac extract, and also believed that soaking infants in water containing some plants such as Sumac could strengthen and disinfect the child's body and reduce the risk of infectious diseases in children [6]. Some *in vitro* studies have shown that Sumac has an inhibitory effect on the growth of some bacteria such as *Propionibacterium acne*, *Escherichia coli*, *Pseudomonas aeruginosa* and *Staphylococcus aureus* [12,13]. Therefore, the researchers suggested that Sumac extract could be as a substitute for harmful chemical detergents in washing and disinfecting fruits [14].

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The famous therapeutic effect of sumac in PM was its efficacy for gout. Recent studies have shown that sumac reduces blood uric acid as a cause of gout, therefore, it is recommended in the treatment of gout [8]. Besides, PM was using Sumac as a liver tonic and prescribing it in the treatment of liver failure-induced ascites [5,15]. Nowadays, the hepatoprotective effect of Sumac is known via its antioxidant and free radical scavenging activities [15,16]. Even, it has been shown that Sumac inhibits the growth of cancer cells [17].

One of the wide applications of Sumac in the PM has been oral use in controlling and reducing internal bleedings such as dysentery and menorrhagia, and topically for external bleedings [5,18]. Interestingly, there is not any *in vitro* or *in vivo* study to confirm the Anti-bleeding effect of sumac. Only one experimental study has shown that Sumac increases PDWc (platelet distribution width) [19]. According to the role of platelets in hemostasis, designing experimental or clinical trials to prove the anti-bleeding properties of Sumac would be more useful.

According to similar proved therapeutic effects of Sumac between PM and current medicine, considering its effect on menorrhagia and other abnormal bleedings in PM, and the importance of controlling heavy uterine bleeding among women, it is necessary to design experimental or clinical researches on the possible therapeutic effect of Sumac for abnormal bleeding.

Conflicts of interest

The authors declare that there is no conflict of interest.

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