



# Alhagi; traditional and modern medicine effective against kidney stones

Fatemeh Varshochi<sup>1</sup>, Khairollah Asadollahi<sup>2\*</sup>

<sup>1</sup>Madani Heart Hospital, Lorestan University of Medical Sciences, Khorramabad, Iran

<sup>2</sup>Department of Epidemiology, School of Medicine, Ilam University of Medical Sciences, Ilam, Iran

## ARTICLE INFO

### Article Type:

Epidemiology and Prevention

### Article History:

Received: 17 July 2015

Accepted: 21 August 2015

ePublished: 26 August 2015

### Keywords:

Alhagi  
Kidney stone  
Iran

### Implication for health policy/practice/research/medical education:

Urinary stones can cause kidney failure, urinary tract infections (UTIs) and severe abdominal pain, blood in urine and flanks pain. Alhagi has been seen in different regions of Iran, especially the north to the border of central deserts, and also grows in North Africa, Saudi Arabia, Syria, Iraq, Turkmenistan, Central Asia and other countries. Alhagi phytochemical such as flavonoids, flavone glycosides, Alhagidin, Alhagitin, proanthocyanidins, triterpenes, tannins, etc which it can be effective on urinary stones.

*Please cite this paper as:* Varshochi F, Asadollahi K. Alhagi; traditional and modern medicine effective against kidney stones. J Nephroarmacol. 2017;6(1):15-16.

## Introduction

Urinary stones are of the most tragic causes of visiting hospitals. Although the cause of the infection and the incidence of kidney stones are not well known, while there are factors known involves in its development (1). Sex, water and age and its minerals, diet, climate and genetic are of the affecting factors (2). These patients are susceptible to renal failure, urinary tract infection (UTI) and usually suffer from severe abdominal and flanks pain (3). The common treatment for renal colic pain is using opioid compounds administration such as morphine and pethidine that have various side effects such as respiratory depression, hypotension and so on (4-6). Regarding less complications in kidney stones patients, in Iranian traditional medicines, it has been known numerous natural compounds which are effective to relieve kidney stones induced pain and have minimum side effects. Alhagi, *Alhagi pseudalhagi*, is a member of *Fabaceae* family are known as a painkiller in patients with kidney stones. Another name of Alhagi is manna grass which is plant of 20 to 120 cm height, with green to dark green prickly branches. Length of the thorns varies from 1 to 6 cm, and their angle is almost right. Leaves are oval-shaped with a width of 3 to 5 mm and a length of 10 to 15 mm, and the flowers which usually appear in 2 to 8 numbers in each thorns are red, purple and brown (7). This plant has been seen in different regions of Iran, especially the north to the border of central deserts, and also grows in

North Africa, Saudi Arabia, Syria, Iraq, Turkmenistan, Central Asia and other countries (7,8). According to traditional medicine the nature of Alhagi is very hot and dry and has diuretic property and prevents kidney spasms, therefore, since ancient times, it has been used to alleviate kidney pain from kidney stones and urinary tract stones expulsion. In addition, it is efficient to attenuate UTI and renal colic (7). Results of experimental studies have shown 66% of patients treated Alhagi extract for 4 weeks expelled urinary tract stones (9). The aqueous extract of Alhagi reduces calcium oxalate kidney stones (10). Alhagi phytochemical analysis have shown that the plant has bioactive and active pharmaceutical ingredients such as flavonoids, flavone glycosides, Alhagidin, Alhagitin, proanthocyanidins, triterpenes, tannins, etc. (11). It seems that the mentioned active ingredients are effective in reducing pain and kidney stones expulsion.

### Authors' contribution

The authors contributed to the manuscript equally.

### Conflicts of interest

The authors declared no competing interests.

### Ethical considerations

Ethical issues (including plagiarism, data fabrication, and duplicate publication) have been completely observed by the authors.

\*Corresponding author: Khairollah Asadollahi; Email: [khairollah\\_asadollahi@yahoo.com](mailto:khairollah_asadollahi@yahoo.com)

**Funding/ Support**

None.

**References**

1. Tanagho EA, McAninch JW. *Smith's General Urology*. 16th ed. New York, NY: McGraw-Hill; 2004:256-91.
2. Menon M, Resnick M. Urinary lithiasis: etiology, diagnosis and medical management. In: *Compbells Urology*. 8th ed. London: Saunders; 2007:3229-305.
3. Khan SR, Thamilselvan S. Nephrolithiasis: a consequence of renal epithelial cell exposure to oxalate and calcium oxalate crystals. *Mol Urol*. 2000;4:305-12.
4. Holdgate A, Pollock T. Nonsteroidal anti-inflammatory drugs (NSAIDs) versus opioids for acute renal colic. *Cochrane Database Syst Rev*. 2004;CD004137.
5. Nicoletta JA, Lande MB. Medical evaluation and treatment of urolithiasis. *Pediatr Clin North Am*. 2006;53:479-91.
6. Pietrow PK, Karellas ME. Medical management of common urinary calculi. *Am Fam Physician*. 2006;74:86-94.
7. Zargari A. *Medicinal Plants*. Tehran: Tehran Univ press; 1997:924-5.
8. Ghasemi-Dehkordi NA, Sajadi SE, Ghanadi AR, Amanzadeh Y, Azadbakht M, Asghari GR, et al. *Iranian Herbal Pharmacopeia*. Hakim J. 2003;6:63-9.
9. Cyrus A, Goodarzi D, Jahangiri V. The effect of Alhagi Pseudalhagi distillate on ureteral stone expulsion. *Arak Med Uni J*. 2010;13:56-62.
10. Shafaeifar A, Mehrabi S, Malekzadeh J, Jannesar R, Sadeghi H, Vahdani R, et al. Effect of hydrophilic extract of alhagi maurorum on ethylene glycol-induced renal stone in male Wistar rats. *YUMSJ*. 2012;17:129-38.
11. Singh VP, Yadav B, Pandey VB. Flavanone glycosides from Alhagi Pseudoalhagi. *Phytochemistry*. 1999;51:587-90.

**Copyright** © 2017 The Author(s); Published by Society of Diabetic Nephropathy Prevention. This is an open-access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.