



1st International Congress of Veterinary Pharmacology & Pharmaceutical Sciences (1st ICVPS)

October 4 - 5, 2008 Tehran - Iran

Closantel toxicosis of sheep and goats in Fars province

Ghane M, Badiei Kh, Hashempor M

Faculty of Veterinary Medicine, Shiraz University, Shiraz, Iran (ghane@shirazu.ac.ir)

Closantel is a halogenated salicylanilide with anthelmintic activity in cattle and small ruminants. This drug binds strongly to plasma proteins in the blood, especially albumin and acts on parasites by interfering with synthesis of adenosine triphosphate (ATP) by cellular oxidative phosphorylation. Metabolic degeneration of this drug mainly occurs in the liver and 80 percent is eliminated in feces and 0.5 percent in urine. Closantel is extensively used for annually deworming programs by farmers especially in sheep and goat flocks in Fars province and accidental poisoning may occur. Four reports of sheep and goat toxicosis with closantel in Fars province were described. One episode occurred in Lar region; a farmer used closantel for his small herd, five times higher than the recommended dose. Eleven, six month to two year-old goats were poisoned. One of them died and the remaining had clinical signs of depression, salivation, blindness, inappetance and ataxia one day after medication. The second episode was occurred after common deworming program in a large herd in Eghlid region. Out of 332 sheep in different ages, twelve, three to six month-old lambs were showed clinical signs of toxicosis including blindness, mydriasis, opisthotonus, nystagmus and wide stance. The third episode observed in three adult Najdi goats that were treated by closantel in two times higher than the recommended dose. Two days after medication, all goats were blind, ataxic and hyperesthetic. The last episode occurred in a small flock of sheep and goat treated by closantel in 1.5 times higher than the recommended dose. Two goats and one sheep showed blindness. These reports describe the iatrogenic poisoning of sheep and goat with closantel and present the clinical finding associated with this toxicosis. The importance of history taking in clinical diagnosis of the toxicosis in these reports is confirmed.

Keywords: Closantel toxicosis, sheep and goats, Fars province

Diuretic effect of *Alhagi maurorum* in Goat

Ghane M, Badiei Kh, Haji Mohammadi A, Mallah AR

Faculty of Veterinary Medicine, Shiraz University, Shiraz, Iran (ghane@shirazu.ac.ir)

Nowadays, the medicinal plants, as endangered components of biodiversity, received special attention. They are important health and economic components of the flora in developed as well as in the developing countries. *Alhagi maurorum* (Syn. *Alhagi camelorum* and *Alhagi pseudoalhagi*) is a spiny plant with strong, stiff, abundant spines, belonging to Fabaceae family which locally known as Aqual. Traditionally, this plant is used for some disorders; the whole plant is diaphoretic, diuretic, expectorant and laxative. Oil from the leaves is used in the treatment of rheumatism. The flowers are used in the treatment of piles. Phytochemical studies on this plant have revealed the presence of unsaturated sterols, triterpenes, tannins, carbohydrates, flavonoids, flavanone glycosides such as alhagitin and alhagidin and proanthocyanidins. To validate the medicinal properties of *Alhagi maurorum*, we investigated the diuretic effects of a distilled product of *Alhagi maurorum* in goat. Five female cross-bred goats were selected and clinical and paraclinical examinations were performed to assure good health status. Control samples of urine and serum were obtained after administration of distilled water at different doses (4, 8, 16 ml/kg) orally. Samples were obtained at 0, 60, 120, 180 minutes following distilled water administration. Distilled product of *Alhagi* was used at the same doses and samples of urine and serum were taken as before described for control samples. Results of oral distilled product of *Alhagi* showed that the level of urine specific gravity decreased. Also, It was shown that the level of pH have been decreased insignificantly. Concentration of Na and Cl is increased in urine following consumption of distilled product of *Alhagi* at doses (8, 16 ml/kg) ($P < .05$). These effects were marked at 180 and 120 minutes. Concentration of urine K and Ca is decreased in urine following oral consumption of distilled product of *Alhagi* at doses 8, 16 ml/kg ($P < .05$). Concentration of urine creatinine is decreased significantly ($P < .05$). Differences of biochemical indices were not significant in serum samples. According to the results, distilled product of *Alhagi* can be used as a diuretic drug at doses 8, 16 ml/kg in the goat.

Keywords: Diuretic effect, *Alhagi maurorum*, Goat