

# Massive Skin Necrosis Due To Pitirak (*Bidents Tripartitata*)

A Terzioglu, N Baser, L Levent, G Aslan

## Citation

A Terzioglu, N Baser, L Levent, G Aslan. *Massive Skin Necrosis Due To Pitirak (Bidents Tripartitata)*. The Internet Journal of Alternative Medicine. 2005 Volume 3 Number 2.

## Abstract

Plants are sources of medication from the ancient times. *Bidents tripartitata* is a plant, which grows in Anatolia. It is believed that it relieves pain of arthritis, with per oral administration of its extract. This article presents 2 cases of massive skin necrosis due to topical application of *bidents tripartitata*. One of the patients had applied it topically on his knees and had developed severe necrosis. The other patient had contact with this plant unintentionally. She had skin necrosis on the dorsum of her hand and forearm. *Bidents tripartitata* is believed to have sedative, diuretic and analgesic effects. The plant includes ether, flavonoids, ascorbic acid, carotene and manganese. Today there is an increasing trend to use natural drugs in treatment of many diseases. It does not mean that all the plants are useful, sometimes the results may be very harmful.

## INTRODUCTION

Plants are sources of medication from the ancient times. They are used in different applications for treatment of many diseases. *Bidents tripartitata* is a plant, which grows in Anatolia. It has spiky leaves and yellow flowers (Fig. 1). It is believed that it relieves pain of arthritis, with per oral administration of its extract. The topical administration of *bidents tripartitata* is uncommon. This article presents 2 cases of massive skin necrosis due to topical application of *bidents tripartitata*.

### Figure 1

Figure 1: The plant *Bidents Tripartitata*; with yellow flowers and spiky leaves.



## PATIENT REPORTS

### PATIENT 1

A 64-year-old male with massive skin necrosis on the knee region was consulted in the outpatient clinic. He was suffering from arthritis in his knees and he had applied *bidents tripartitata* topically for the relief of his pain. He just put the plant on his knees and tied with a dressing for 24 hours. After he had opened the dressing he noticed that the knee region was purple in color. He ignored the situation and was consulted by a doctor 3 days later, when the lesion went black in color. He was referred to our clinic one week after the initiation of the lesions. On the physical examination, he had extensive skin necrosis on the anterior aspect of his knees (Fig. 2). The patient underwent debridement and the defect was covered with split-thickness skin graft harvested from the anterior aspect of the thigh. The patient had no complication as infection, fluid collection or graft loss.

**Figure 2**

Figure 2: Bilateral extensive skin necrosis and superficial cruts on the knee region



**PATIENT 2**

A 48-year-old female was consulted with skin necrosis in her upper extremities bilaterally and on her face. The necrosis was widely spreading, especially on the dorsum of hand and forearm and also on her face (Fig. 3, 4). In her history we determined that she had contact with the plant *bidents tripartitata* unintentionally. She had debridement and the defects on the dorsum of the hand and forearm were closed with split-thickness skin graft harvested from the anterior thigh. The postoperative course was uneventful. There had been no complications as hematoma, seroma and total or partial graft loss. The lesions on her face were left to secondary healing. The wounds healed in one week with no complication.

**Figure 3**

Figure 3: Skin necrosis on the dorsum of the hand and forearm bilaterally



**Figure 4**

Figure 4: Widely spreading erythematous lesions on face; especially on the forehead and malar region



**DISCUSSION**

Skin necrosis due to contact with plants is very uncommon. In these cases there is a contact with the plant *bidents tripartitata*, resulting with massive skin necrosis. In differential diagnosis, phytophotodermatitis and allergic contact dermatitis should also be considered.

Phytophotodermatitis is a toxic dermal eruption caused by the interaction of certain plants and sunlight on human skin. The combination typically produces an erythematous, “sunburn-like” response accompanied by blisters and later followed by hyperpigmentation. Furocoumarins (psoralens), which are very potent photosensitizers, have been identified as the offending agents. The substances occur naturally in four major plant families: Rutacea (i.e., limes, bergamot, the gas plant), Umbelliferae (i.e., celery, parsley, wild carrot, dill), Moraceae (i.e., figs, *Ficus* sp.), and Leguminosae (i.e., *Psoralea* sp.) (3). Interestingly, Barachee seeds (*Psoralea corylifolia*) have been used for thousands of years in India to treat vitiligo because of the residual hyperpigmentation that results (1). The typical course of phytopotodermatitis includes erythema and blister formation occurring 12 to 48 hours after exposure to both plant and intense sunlight. Some degree of pain may be present, as well as pruritus. The linear streaky markings occur in the areas that come in contact with the plant and are later exposed to sunlight. Typically the “sunburn-like” reaction resolves spontaneously in three to ten days, depending on its severity, and is followed by hyperpigmentation of variable duration. Scarring is a rare sequel.

In our cases there is contact with plants, but there is no sunlight exposure in patient-1. Also necrosis is uncommon,

both in allergic contact dermatitis and in phytophotodermatitis. Patients had no complaints about pruritus or pain, but only rapidly progressing and widely spreading skin necrosis. The responsible agents for dermal hurts are; biogenic amines, lactones, diterpenic esters, furocoumarins, quinones, long chain phenols and acetylenes frequently (2).

*Bidens tripartitata* is believed to have sedative, diuretic and analgesic effects. Therefore it is widely used in treatment of arthritis and many other diseases. The plant includes ether, flavonoids, ascorbic acid, carotene and manganese. There is no side effect of skin necrosis resulting from *bidens tripartitata* in oral administration. Also in literature there are no reported cases that had skin necrosis due to topical administration of *bidens tripartitata*.

## **CONCLUSION**

Today there is an increasing trend to use natural drugs in treatment of many diseases. We should not think that all the drugs derived from plants are innocent. The treatment results with some plants may be hazardous as seen our cases.

## **CORRESPONDENCE TO**

Nesrin Tan Baser, M.D. Arjantin caddesi, No: 6/5 G.O.P. Ankara – TURKEY Tel: +90 312 5953662 Fax: +90 312 4676510 email: drtanbaser@superonline.com

## **References**

1. Juckett G. Plant Dermatitis. Postgraduate Medicine 1996; 100 159-171.
2. Martinetz D, Sonntag U. Skin Irritating Substances in Plants. Z Gesamte Hyg 1989; 35 386-90
3. Stoner J, Rasmussen J. Plant Dermatitis. J Am Acad Dermatol 1983; 9 1-15.

**Author Information**

**Ahmet Terzioglu**

Department of Plastic and Reconstructive Surgery, Ankara Training and Research Hospital

**Nesrin Tan Baser, M.D.**

Department of Plastic and Reconstructive Surgery, Ankara Training and Research Hospital

**Levent Levent, M.D.**

Department of Plastic and Reconstructive Surgery, Ankara Training and Research Hospital

**Gürcan Aslan, M.D.**

Department of Plastic and Reconstructive Surgery, Ankara Training and Research Hospital