

Ant-eaten alopecia, a cause of sudden localized hair loss**Mohammad Hossein Lohraseb¹, Fatemeh Khajeh*², Reza Pour Mohammadi³, Siavash Motazedian⁴**¹Dermatologist, professor assistant, Fasa University of medical sciences, Iran,²Pathologist, professor assistant, Fasa University of medical sciences, Iran³Medical student, Fasa University of medical sciences, Iran⁴Otolaryngologist, professor assistant, Fasa university of medical sciences, Iran***Corresponding author**

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Abstract: Here we report 38 cases of ant-cut alopecia in patient who referred to Fasa dermatology clinic that is affiliated to Fasa University of medical sciences, during past eleven years. The patients ages ranges from 17 to 69 years old. 29 patients were male. All of them have complained about suddenly localized hair loss on scalp or beard area after awakening. On awakening cut hair were left on their pillow or bed cloths; sometimes the patients declares that some ants are present between hair bunches or on bed cloths. All of the hairs have been cut only around few millimeters above the skin level. Sometimes sign of few bite and erythematous macule were apparent on the site of hair loss. 30 out of patients (80%) were Opium addict. The diagnosis of this rare cause of alopecia is based on clinical examination and history taking and the hair regrow without medication.**Keywords:** Alopecia, Alopecia areate, Ants, Opiate addiction, Narcotics.

INTRODUCTION

The causes of sudden hair loss are alopecia areata and trichotillomania. But we observe several patients who presented with sudden hair loss in the morning, that these two usual differential diagnosis role out in them and the hair loss had the pattern of shaving with multiple erythematous macules. The patients presented with sudden localized hair loss after awakening, they usually can find cut hairs and red-brown ants on bed or pillow. These ants have big head and belong to the Pheidole species. The first report of ant-induced hair loss was published by Radmanesh and Mousavipour from Iran in 1999.

The most important point is the awareness of this kind of hair loss and history taking and physical examination of these patients which consisted below triad

1. Sudden localized hair loss, after awakening of deep sleep
2. Presence of red brown ants and hair cut in bed
3. Shaving pattern of hair loss and erythematous macule

CASE PRESENTATION

In the eleven years of our practice in Fasa dermatology clinic that is affiliated to Fasa medical

school we observe 38 patients who presented with abrupt localized circular patch hair loss on scalp and beard area (two cases) after awakening. The entire patient reported several ants and significant amount of hair on their bed. Dermatologic examination revealed one or several localized hair loss in scalp and/or beard area, the hairs were cut about few millimeters above the skin surface look like shaved surface. Several tiny erythematous macules (sting site) were present on the hair loss area. Some of the patients complained of mild itching over the hair loss regions. No inflammation, scale, twisted hair, or exclamation-mark hairs were present [1, 2]. The remainder of the dermatologic examination was completely within normal limits in all of them. Personal and family history was unremarkable in 32 cases, 4 of them had coronary heart disease and hypertension, two of them have asthma, and one had psoriasis. Most of the patients see some red brown ant on bed and pillow with bunch of cut hair, some of the patients bring these ant to clinic which examined and were belong to the Pheidole species consists of big-headed ants which are prevalent species in Iran. The novel finding in several patients that had referred to our clinic with the diagnosis of ant-cut alopecia is the high percentage of opium abusing, more than 80 % (30 patients) [3, 6].



Fig 1: A patch of localized hair loss on scalp of a 18 years old man. Note the sting sites and type of haircut.



Fig 2: An oval patch of localized hair loss on scalp of a 33 years old man.

DISCUSSION

The hairy skin of scalp, pubic hairs, beard and eyelashes are hosts to many arthropods such as lice [3]. Sharma and et al. reported a case of generalized scalp hair loss after several honey-bee stings [4]. Skin lesions on neck with ticks comprise broken hair and alopecia involving the dorsal portion of the lower neck, often extending in a collar around the neck [5].

The first report of ant-induced hair loss was published by Radmanesh and Mousavipour [6], and then followed by Shamsadini [7] Aghaei [8] and Namazi [9], all from Iran.

Many ant species are equipped with powerful stings and are capable of inflicting painful bites. There are two main groups in the super family of Formicoidea ants, the Myrmecoid complex, the including Australian jumper and bull ants, and Poneroid

complex contains species of Solenopsis, the fire ant, and Pheidole [10]. The Pheidole species are dimorphic, brown-red ants that are prevalent in Iran [3, 7, 12]. Pheidole species consists of big-headed ants with two nodal spines on the thorax. The ants are dimorphic, meaning they have two sizes in a colony. [3, 7, 12]. The smaller size, or minor worker, gathers seeds; the larger, or major worker, uses its oversized head and jaws to break the seeds open [3, 7] Big-headed ants usually have small colonies, but they can have several colonies around or in a structure. [3, 5] These ants are grain and seed feeders. They are often found feeding on cakes, breads, and pet food products [3, 5,7] They enter homes through expansion joints or cracks in the slab. Protein-containing baits are generally effective against these ants. Granular baits can be applied to the nests outside if they are found [3, 5, 7].

The important clue for diagnosis of ant induced alopecia is abrupt onset after long sleeping, the cut hair just a few millimeters above the skin surface and presence of ant and cut hair on the pillow or bed in addition to unremarkable dermatologic examination. The distinct points in our reports are a lot of the patients who observed in eleven past years and high percentage of opium addiction in this group (80%).

We suggest some hypothesis to explain the association of this rare finding ant eaten alopecia in opium abuser patients:

1. They are sleeping more and deeper than usual people and there is enough time for ant activity and bite.
2. The pheidole ants are lipophilic insect that like the greasy hair of low sanitary; and the addict individual usually are low sanitary people.
3. Possible effect of opium on ant's nervous system and powerful jaw might result more powerful and durable bite and cut.

As the best of our knowledge this is the fifth report of ant-induced alopecia and the first one that report the association between ant-induced alopecia and opium abuse; all of the reports of this manifestation were from Iran and no reports has been found from other countries. As we know the opium is one of the most common narcotics in eastern world but not mentioned in previous reports. Although our report include the highest number of ant cutter induced alopecia in the world and indicate a possible relationship of this rare finding and opium abuse but needs further investigation to prove it for example by use of hair test for rule out addiction. This test required only a few hairs from any site of body, not affected by soap or shampoo and even after 3 months of drug caseation is respond.

CONCLUSION

Diagnosis of ant-eaten alopecia is possible by history taking and clinical examination. Only reassurance is enough, because the second invasion by cutter ants is not reported till now and the cut hairs regrow without medical therapy. This report is unique because of the high numbers of our observation and significant opium relation.

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