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AINHUM- a rare case report

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ABSTRACT

We hereby report a rare case report of AINHUM involving the 4th toe of left leg. Very few cases were reported worldwide and most of them had typical presentation as mentioned in literature .This particular case seems to present apart from the rest. The number of cases reported worldwide are very few with highest incidence reported from African nations particularly people living in West Africa (Browne et al. 1962) and South America. This is to our best knowledge after going through literature and statics of India as the 4th reported case of AINHUM. The term AINHUM is of African derivation meaning" to saw "or "to cut". It is characterized by a linear, narrow, fibrous constricting digitoplantar fold of the toes usually seen on the 5th toe followed by 4th 3rd n 2nd .This constriction becomes deeper and deeper and produces strangulation of all the tissues under the ring together with an absorption and many times a pathological fracture of the bone .Gradually the distal end of the toe becomes enlarged, bulbous and remains attached by a mere pedicle. Eventually there is spontaneous amputation (Carvalho et al. 2000) of the toe.

1. INTRODUCTION

The term Ainhum is of African derivation meaning to saw or cut & is given to a curious disease peculiar to the dark skinned races especially the Negros. In India so far only three cases have been reported. Ainhum is characterized by a linear, narrow, fibrous and constricting band beginning at the digito plantar fold of toes.

2. CASE REPORT

A 50 year old female presented to our OPD with chief complaint of swelling on the left 4th toe. Ulceration was seen on the plantar aspect of the 4th toe, No h/o pain, No signs of inflammation No signs of ischemia, Personal and family history were not significant, All peripheral pulses were normally felt, No regional lymph nodes Surgical profile –WNLX-

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ray revealed- soft tissue constriction with band like formation over distal phalanx, Arterial Doppler - normal Pseudoainhum has been ruled out {Leprosy, syphilis, scleroderma, vohwinkel syndrome}

3. DISCUSSION

AINHUM is an acquired condition (Farlex Partner Medical Dictionary; Kean et al. 1946; Kandhari et al. 1963; Goehring, 1944; Browne et al. 1962; Bluefar et al. 1948; Bloom et al. 1933; Ahharwal et al. 1963) exists in the formation of a constriction ring (Bluefarb, 1948) involving a part of or the entire circumference of the fifth toe at or near its base. Etiology of Ainhum is not fully understood (Tropical dermatology. Landes Bioscience. 2001). Numerous theories have been advanced from time to time but none offer a satisfactory explanation. Literature reveals that Ainhum is not due to infection by parasites, bacteria or virus and it is not related to injury. Few theories supported that bare foot walking was one of the cause for Ainhum but it also occurs in patients who has never gone barefoot. Other theories state that it occurs due to decreased blood flow in posterior tibial artery and absence of plantar arch.

Cole describes four stages of Ainhum

Grade 1-groove
Grade 2-floor of the groove is ulcerated
Grade 3-bone involvement
Grade 4 –auto amputation (Ahharwal et al. 1963; Bloom et al. 1933; Kandhari et al. 1963) has occurred.
The recognized varieties of Ainhum appear to be as follows

A) TRUE AINHUM
B) Condition stimulating Ainhum but due to trauma (Bloom et al. 1933)
c) Ainhum like syndrome
D) Pseudoainhum

True Ainhum

Usually affects dark sinned people Constricting band usually around 5th followed by 4th 3rd Often evidence of hyperkeratosis (Fitzpatrick's Dermatology In General Medicine; James et al. 2005; Andrews' Diseases of the Skin: Clinical Dermatology; Browne et al. 1962) in the groove associated bony changes. It occurs for course of months or years before auto amputation takes place, it's a progressive disease (Browne et al. 1962).

Condition Stimulating Ainhum But Due To Trauma

IN malingers who tie a tight band or ring over the digits and the resultant prolonged pressure then Produces the features of syndrome.

Ainhum like Syndrome

There are many references in the literature to cases in which a condition simulating Ainhum is found in association with systemic disease. It has been described, For example, in association with scleroderma, trophoneurosis, pityriasis rubra Pilaris, syphilis, leprosy, osteomyelitis.

Pseudo Ainhum

(Rashid et al. 2007)

1. Congenital ring strictures around the digits.
2. There may be associated intra-uterine amputations.
3. Race not an important feature. May occur in the white or black race.
4. No associated bony abnormalities are found.
5. There is no associated systemic disease.
6. There is no hyperkeratosis of the fissures.

4. CONCLUSIONS

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Case study has been made as it is a very rare case and interesting clinically although no special surgical procedure has been advised. I would like to report the case as it is very rare and in India so far only three cases have been reported.

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Written informed consent was obtained from the patient for publication of this case report and accompanying images

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