



ORIGINAL RESEARCH PAPER

Surgery

WORMHOLE!! A RARE CASE OF GUINEA WORM INFESTATION PRESENTING AS CYSTIC SWELLING

KEY WORDS:

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INTRODUCTION:

Guinea worm infection, crippling but rarely fatal parasitic disease, caused by *Dracunculus medinensis*, a common cause of disability in rural areas of Africa, south-west Asia, and India, is one of the most easily preventable parasitic disease. Worms up to 70-80 cm in length develop in the subcutaneous tissues of the feet or legs and the larvae are liberated to renew the cycle when an infected individual steps into a well or pond from which others draw drinking water which has become infested with infected cyclops, a microcrustacean. Rural Population dependent on open surface water are the most affected. Guinea worm infestation manifesting as a soft tissue swelling is an extremely rare presentation with only 4 – 5 documented cases in literature.

EPIDEMIOLOGY

World-wide eradication programs were first implemented in the early 1920s. This goal has been reached in numerous areas of the world with the last case in India being reported in 1997 and in all of South East Asia region by 2000. Ten years after reporting the last case of dracunculiasis, few cases have been reported in a highly unusual pattern, the vast majority of which have occurred alone in separate villages, unconnected to other cases by person, place, or time.

Guinea worm infections in dogs in Chad were confirmed in 2012; since then the number of dogs infected with Guinea worms has increased annually and far surpassed the number of human cases.

The working theory for the unusual circumstances in Chad is that dogs and the occasional human are getting infected by eating an aquatic animal that is itself infected with Guinea worm (called a paratenic host).

occasional pain and itching.

Examination: A 2x1 cm hemispherical swelling, non-tender, well defined margins, firm in consistency, mobile. Systemic examination & haematological investigations were within normal limits.

Diagnosis: Sebaceous cyst

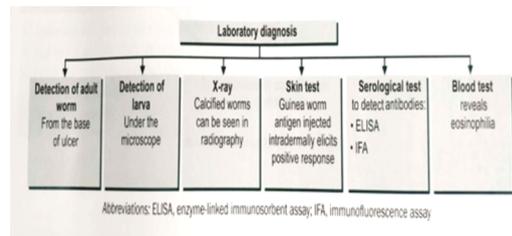
Management: Excision in toto A live worm came out of the tissue on incision and the tissue along with the worm was removed in toto.

Histopathology

Macroscopically, a linear piece of worm measuring 10 cm in length also seen with suspicious hook end.

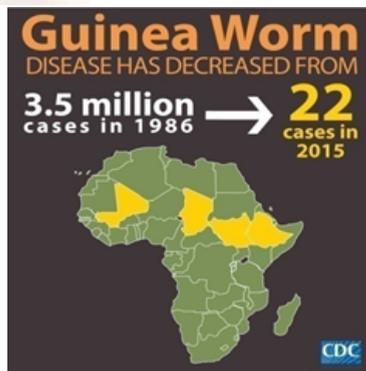
Microscopically fibrocollagenous and fatty tissue with focal collection of inflammatory cells consistent with nemathelminths infestation possibly *Dracunculus medinensis*.

Treatment and Follow up: Patient was treated with Tab. Metronidazole 400mg Tid for 2 weeks. On regular follow up no recurrence.



CASE REPORT:

History: 21-year-old male with a swelling over left cheek for the past 2 months, insidious in onset associated with



DISCUSSION

Life cycle - As depicted in the picture

Location -

- Subcutaneous tissues, which regularly comes in contact with cold water like hands, legs, feet.
- Death of adult worms in joints can lead to arthritis and paralysis in the spinal cord.
- Sometimes the worm travels to unusual sites such as the pericardium, the spinal canal or the eyes, with serious

effects.

Clinical Features - Pain in joints, nausea, fever, pruritus, blisters, ulcers, eosinophilia, and secondary infections. In the best-case scenario, after extraction of the worm, the patient may only be disabled for weeks to several months.

The is no way to guarantee immunity.

Incubation Period -

In Cyclops - 1-3 weeks

In Humans - one year

Management

- Intact removal of the worm with appropriate antibiotics
- Niridazole (25 mg/kg/day daily for 10 days),
- Thiabendazole (50 mg/kg for 3 days),
- Metronidazole (400mg for an adult for 10-20 days)
- No vaccine available

Prevention:

- Continuous surveillance,
- Preventing transmission - provision and maintenance of safe drinking water, Temephos treatment of water,
- Water filtration with fine mesh (size 100 micrometers), or double layered cloth strainers to remove Cyclops.
- Health promotion and behaviour change.

REFERENCES

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2. Ghosh S. Paniker's textbook of medical parasitology. JP Medical Ltd; 2017 Sep 14.