



THE ATTACK OF LITTLE DRAGON

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. INTRODUCTION .

Dracunculiasis is a parasitic disease caused by the parasite worm *Dracunculus medinensis*, commonly known as guinea worm (GW). *Dracunculus* is a Latin term for "little dragon". Although this disease is uncommon, it has been persistent and can cause significant morbidity. In 2002, more than 90% of the cases reported from African countries. Meanwhile in Malaysia, no case has been reported since 1981. As of the end of 2017, only 30 cases of Dracunculiasis in humans were reported worldwide.

. CASE REPORT .

A case of a 65 years old woman with underlying Sick Sinus Syndrome on pacemaker, Varicose vein and Atrial Fibrillation; presented with abdominal pain, diarrhea and vomiting for two days. She denied history of travelling and has been consuming treated water and also practiced good hygiene. Clinically she appeared pink, good hydration and vital sign were stable. On abdominal examinations, soft but generalized abdominal tenderness upon palpation with normal bowel sound. Her blood investigations were normal. Abdominal and chest x-rays noted scattered serpiginous and coiled calcification which was reported as Dracunculiasis by worm infestation likely subcutaneous tissues. Patient was treated with oral albendazole and analgesic. Subsequently, she was discharged with follow-up at nearest health clinic.

. DISCUSSION AND CONCLUSION .

Since Global GW Eradication Program was implemented in 1980 by WHO, Dracunculiasis has been very uncommon in Malaysia. People become infected when they drink water containing copepods (water fleas) that harbour infective larvae. The ingested copepods are killed by the digestive juices of the stomach. The released larvae then move to the small intestine, where they penetrate the intestinal wall and migrate to the connective tissues of the abdominal wall and the thorax. Male and female larvae mature and mate 60–90 days after infection. The male worm dies shortly after mating, and the female matures over the subsequent 10–14 months, slowly migrates to the surface of the body and emerges through the skin. When affected body parts are submerged in water, the female worm releases larvae, which are ingested by copepods, thus completing the life cycle.

Patient may present with unspecific symptoms. Thus imaging is a very useful modality to aid in diagnosis of Dracunculiasis. The presence of long linear, serpiginous or coil, whorl "chain mail" types of calcification in the soft tissues on radiological imaging supports the diagnosis of Dracunculiasis.

The definitive treatment is the extraction of the adult worm by using a stick and wrapping or winding the worm a few centimeters per day at the patient's skin surface. This procedure can take several days to weeks depends on the worm length as they can grow up to 1 meter length. Metronidazole or thiabendazole can be used as adjunctive to extraction treatment. Till today, there is no definitive drug in treating Dracunculiasis.



Figure C Picture of worm extraction from skin (Source: Vinod K Dhawan 2018. Dracunculiasis)

Close follow-up and monitoring is extremely important to track the progression of extraction in patients.

Chronic ulcer is the most common complication in Dracunculiasis patients, followed by cellulitis, abscesses, sepsis and septic arthritis.

In summary, although considered eliminated from most of countries, Dracunculiasis can still exist in our local health setting. Appropriate measures have to be taken towards citizens who travel to endemic country of Dracunculiasis such as Africa and India to prevent recurrence of the disease. Physicians should also be aware of this rare diagnosis. Early treatment should be initiated to prevent significant morbidity.

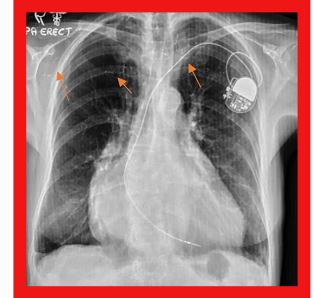
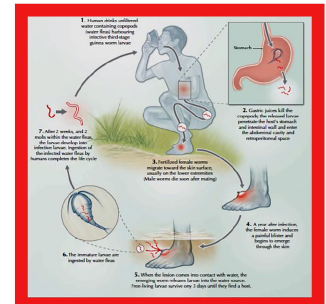


Figure 1 : Chest X-Ray



Figure 2 : Abdominal X-Ray



Life Cycle of The Guinea Worm (Illustrate from Chris Greenaway 2004. Dracunculiasis (guinea worm disease))

. REFERENCES .

- 1 Chris Greenaway 2004. Dracunculiasis (guinea worm disease). CMAJ. 2004 Feb 17; 170(4): 495-500. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC332717>
- 2 Donald R. Hopkins, Ernesto Ruiz-Tiben, Mark L. Eberhard, Adam Weiss, P. Craig Withers Jr, Sharon L. Roy, and Dean G. Sienko. 2018. Dracunculiasis Eradication: Are We There Yet? Am. J. Trop. Med. Hyg., 99(2), 2018, pp. 388-395. doi:10.4269/ajtmh.18-0204
- 3 Vinod K Dhawan 2018. Dacunculiasis. Updated Sept 24 2018. <https://emedicine.medscape.com/article/997617>