Dracunculosis-A Disease of Yesteryears

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A 69 year old female presented in 2005, with painful swelling and discharging sinus of right ankle of 1 week duration. She was under treatment for bone marrow confirmed myelodysplastic syndrome. On examination she had pallor, swelling of the right ankle and a discharging sinus on the lateral aspect with a thick-thread like structure coming out of it. The thick-thread like structure was initially thought to be dressing material and on cleaning it with saline it was realised that the distal part of it was brownish and shrivelled up whereas proximal part was whiter (Figure 1). Her laboratory examination was normal except for the normocytic normochromic anaemia with haemoglobin of 7 gram/dl. The discharging fluid was examined under microscope and multiple first stage larvae were seen. She was diagnosed to have dracunculosis and myelodysplasia. She was treated with tetanus toxoid, ciprofloxacin, metronidazole and with a drip of clean drinking water pouring drops over the sinus to facilitate the worm extraction.

Dracunculosis or guinea worm is caused by Dracunculus medinensis. It is believed that the ‘fiery serpent’ of Bible described in 1500 BC was this worm infestation. It enters the gastrointestinal tract by taking water contaminated with dracunculosis infected Cyclops. The Cyclops has third stage larvae and after ingestion the outer coating of it is digested by the acid of stomach. It enters the intestinal mucosa and reaches the skin where male and female worms develop. Male is smaller and female is larger. After fertilisation male worm dies and female worm reaches the cool areas of body like lower limbs. It forms a blister and comes out through it to expel her first stage larvae into water. These larvae persists in water for some time and are taken up by the Cyclops where they develop into second and third stage larvae before being ingested by the humans to complete the life cycle.

This patient probably acquired infection before the deemed eradication of dracunculosis from India.¹ The adult worm may cause arthritis, get calcified or sinus formed by emerging worm may get secondary bacterial infection including tetanus.

Reference