



MYIASIS

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Myiasis is the infestation of mammalian tissues by dipterous (two-winged fly) larvae. The skin is the most common site, but other areas can be involved, including ocular, auricular, gastrointestinal, and genitourinary. Cutaneous myiasis may present in one of three ways: a superficial infection of larvae (maggots), a dermal slowly migrating erythematous patch, or as a furuncle. This article describes the furuncular form of cutaneous myiasis.

This presentation of furuncular cutaneous myiasis is common with the human botfly, *Dermatobia hominis*. The flies are found in the forest and jungle areas especially around rivers and streams, and along the coastal areas. It is a common parasitic infestation in endemic areas from central Mexico through Central and South America. The botfly uses both wild and domestic animals and birds as its normal hosts, although humans occasionally can become infected. In Africa, a similar type of furuncular cutaneous myiasis is caused by the tumbu fly.

The human botfly has a fascinating and complicated life cycle. The female fly can produce eggs but have no direct means of introducing them into a host. Instead the female captures another species of biting arthropod, usually mosquitoes, and by holding its wings with her legs she glues 15 to 30 eggs on its abdomen. She will then repeat many times over the next 8 to 9 days producing 100 to 400 eggs. If an insect vector cannot be found, the eggs are deposited on plant leaves which may come in contact with a host. The insect vector is not harmed by carrying the eggs. When it bites a warm blooded animal, the heat from the mammal causes the larvae to hatch and escape from their eggshells. These burrow into the skin via the bite, a hair follicle, or through intact skin. The larvae are now safe to feed and grow, establishing a boil-like pouch below the dermis. A small opening is kept open to allow it to intermittently breathe through its respiratory tube. The larva undergoes three moltings in the next 5 to 12 weeks reaching a size of 2 cm or more in length. It then enlarges the pore and falls to the ground, spending 2 to 4 weeks in the soil to pupate. Finally an adult fly emerges completing the life cycle.

Clinically lesions of myiasis are found on exposed skin, most commonly the extremities, back, or scalp. Within 24 hours of a larva entering, a small erythematous papule appears. This gradually enlarges to form a furuncle-like lesion up to 3 cm in diameter surrounded by a larger area of induration. In the center a 2 to 3 mm breathing hole or punctum can be seen with serous, serosanguineous, or seropurulent exudate given off. Examination of the punctum may reveal movement of the larva or small bubbles as the larva breathes. The patient's symptoms may range from mild pruritus to intermittent or constant sharp pain.

Different treatment methods have been described to remove the larva. The native method involves introducing tobacco juice and squeezing tightly. If the punctum is wide, an effective method is to occlude this opening causing the larva to migrate out of the skin as it attempts to breathe. Substances described as being effective include petroleum jelly, pork fat, nail polish, adhesive tape, chewing gum, bee's wax, butter and mineral oil. Incising the lesion is a fast effective method. A small incision is made over the punctum and firm pressure with fingers or the ends of two tongue depressors can usually express the larva. This technique is similar to the removal of a **pilar cyst** on the scalp. Surgical excision with debridement of the cavity is required only if the above methods fail. Once the larva is removed, the site heals quickly leaving a small pigmented scar that fades over time.

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