

## 4 MISCELLANEOUS OUTBREAKS OF INTEREST

### Tumbu fly cutaneous myiasis in KwaZulu-Natal Province

#### Outbreak in KwaZulu-Natal Province

On 01 June 2015, the Uthungulu District Department of Health received a notification about a suspected myiasis outbreak. A number of school children from Nhlabani (uMbonambi local municipality) and Mzingani areas (uMhlathuse local municipality) had presented at a local public healthcare facility with abscess-like lesions. Initially, five children were referred to the healthcare facility after their teachers noticed the skin lesions, mostly located on the skull, arms and legs. The children reported that the lesions began as a pimple, which enlarged over a number of days with subsequent emergence of a 'worm' or 'maggot'. The lesion then resolved and healed, in some cases associated with scarring.

Department of Health officials conducted an investigation at the school and surrounding community, and engaged in public health awareness and health promotion activities. Specimens (maggots) were collected and sent to the local National Health Laboratory Service (NHLS) for identification. Healthcare workers were advised to cover lesions with petroleum jelly ('Vaseline') which facilitates removal of the maggots, and not to prescribe antibiotics. During the school visits, 31 additional cases of infestation were identified amongst the children. A number of adults also reported infestation.

#### Cutaneous myiasis: useful information for healthcare professionals

Myiasis is an infestation of the skin by developing larvae (maggots) of a variety of fly species. Human myiasis occurs worldwide and is endemic in many poor socioeconomic regions of tropical and subtropical countries where poor hygiene and low socioeconomic status are important risk factors for acquiring myiasis. The most common flies that cause cutaneous myiasis in humans are *Dermatobia hominis* (the human botfly, not present in Africa) and *Cordylobia anthropophaga* (the tumbu fly, also known as the 'mango' or 'putsi' fly).

Adult female tumbu flies lay eggs on clothes or bedlinen that is hung out to dry, on soiled clothing,

or in sand or soil contaminated by urine or faeces. After hatching, the tumbu fly larvae penetrate into healthy skin of humans or animals (such as dogs or rodents). Following skin penetration, an erythematous furuncle-like nodule develops after a few days; 8-12 days later, the mature larva leaves the lesion. The typical lesion characteristically has a central punctum that may have an exudate (serosanguinous or purulent), and inflammatory changes around the lesions are common. Symptoms include pruritis and pain, and sometimes a sensation of movement within the lesion. Once the mature larva is expelled, the lesion heals spontaneously unless bacterial superinfection occurs.

Human-to-human transmission of myiasis does not occur. Treatment of tumbu fly myiasis involves placing an occlusive ointment (such as petroleum jelly) over the lesion; this prevents the larva from breathing, forcing it to wriggle towards the surface and emerge spontaneously or be mechanically extracted.

Localised outbreaks of myiasis are not uncommon in South Africa, especially in the warmer, humid areas of North West, Limpopo and KwaZulu-Natal provinces.

Myiasis due to tumbu fly can be prevented through ironing laundry, drying laundry in full sunlight in well-ventilated areas, drying laundry under mosquito netting, or drying laundry in an electric dryer (tumble dryer). The use of insecticides or mechanical traps can assist in eliminating the flies from living and work areas. Affected dogs with large numbers of lesions may be dipped in an appropriate insecticide solution (as for prevention of tick or flea infestation) under veterinary guidance.

**Source:** Division of Public Health, Surveillance and Response, NICD-NHLS; District and Provincial Departments of Health, KwaZulu-Natal Province