

## GUIDELINES FOR THE MANAGEMENT OF MOSQUITO BITES

Over the past two years, we have been witnessing severe reactions to mosquito bites, especially in children, adolescents and young adults after the discovery of the Asian tiger mosquito on our island. These are largely due to a local chemical cellulitis rather than hypersensitivity. The clinical manifestations are mainly characterised by a zone of erythema around the bite, pruritus and moderate to extensive swelling of the part.

In severe cases, especially when multiple bites occur with gross swelling and severe pruritus of the part, a topical and/or oral corticosteroid might be indicated, following specialist advice.

### **Initial management**

It is recommended that a cold compress be initially applied to the affected area, followed by the application of an antiseptic cream such as chlorhexidine or hydrogen peroxide cream. A suitable, oral anti-histamine preparation should be given, followed by frequent application of an anti-histamine cream. There is absolutely no reason to prescribe an antibiotic cream for such situations since the vast majority of bites will not be infected.

### **Secondary infections**

Evidence of secondary bacterial infection includes the development of pain, tenderness and an extension of the erythema beyond the bite. Only in such cases is an oral antibiotic indicated and it should have a spectrum of activity directed primarily against *Staph. aureus* and *Str. pyogenes*, such as cefalexin or flucloxacillin. As in most skin infections, there is no need for Gram-negative cover; therefore antibiotics such as co-amoxiclav, cefuroxime and ciprofloxacin are not treatments of choice. Topical antibiotics should also

be avoided because of the likelihood of poor penetration to the site of infection in the deep dermis and high levels of resistance in local strains of *Staph. aureus* to some topical preparations. If a vesicle or bulla forms, which is not uncommon, its contents may be aspirated using an insulin syringe, after decontamination of the skin with 70% isopropyl alcohol. If the fluid is turbid, a direct Gram stain and culture should be performed on such specimens, which should be submitted to the testing laboratory in a plain, sterile (urine-type) container.

### **Public Health measures to avoid mosquito bites and control mosquitoes**

- This particular mosquito bites mainly during the daylight hours; where possible minimize areas of exposed skin during outdoor activities
- Insect repellants like Permethrin can be applied to clothing.
- Aerosol insecticides, vaporizing mats and mosquito coils can help to clear rooms of mosquitoes.
- Optimum protection can be obtained by using repellents on exposed skin. (Products containing DEET.)
- Have secure screens on windows and doors.
- Get rid of mosquito sources in your yard, garden by emptying empty **standing water** from flower pot, buckets and barrels. Change water in pet dishes every three days and replace water in bird containers every week.
- Keep children's wading pools empty and on their sides when not in use.
- Do not leave fish ponds without fish. Keep suitable fish such as goldfish, gambuzja (guppy), muzaq (jelly fish) in bore holes and fish ponds.
- Empty swimming pools when these aren't being used, especially if the water is not chlorinated.
- Locate puddles that last more than three days, inlets to sewers and drainage systems holding stagnant water and drain them.

- Roof gutters should be kept clean of fallen leaves and other debris so that water does not collect in them.
- Flower pots, standing flower vases, knotholes and other crevices that can collect water should be filled with sand or fine gravel to prevent mosquitoes from laying eggs in them.
- Neighbourhood residents should work together to eliminate breeding sites like abandoned cars, old machinery and other junk in vacant areas. Litter can also hold rain water and should be removed.
- Any standing water in pools, catchment basins, etc, that cannot be drained or dumped can be periodically treated with properly labelled insecticides.
- Businesses should cover tyres, store them indoors or treat them with an insecticide for control of mosquito larvae.