



PATIENT TUTORIAL

BURN INJURIES RESULTING FROM HOT WATER BOTTLE USE

Hot water bottles are commonly used to relieve pain and for warmth during the colder months of the year. However, they pose a risk of serious burn injuries.

Due to increases in energy prices, load shedding in South Africa as well as the low economic status and poor infrastructure means that the general public are increasingly opting for alternative methods of keeping warm which has resulted in an increased demand for and usage of hot water bottles.

It is easier and cheaper to boil water and fill up a bottle than purchase other means of heat radiating equipment in the home. It is also easy to carry along. The recent increase shows people carrying these bottles to work, patients carrying these to outpatients units in hospitals, to healthcare institutions and to places where the heating system is not sufficient to keep them warm.

However the risks that these bottles pose is great and can become life threatening and more especially in diabetic patients with renal nephropathy. Burns on its own poses numerous risks and in renal patients this is enhanced due to co-morbidities. Diabetic patients due to their poor circulatory system may not have sensations and this increases the risk of hot water bottle burns.

The Table below explains the risks that is associated with the use of Hot Water Bottles.

Table 2 detailed definition of injury mechanism

Mechanism	Definition
Contact injury	Burn injury caused by the touching or meeting of the surface of an excessively hot water bottle with the skin
Accidental spillage	A burn injury caused by the accidental spillage of boiling water from the designated opening of the hot water bottle used for filling the bottle
Bottle burst injury	Sudden, unexpected breakage of the hot water bottle either spontaneously or due to patient misuse leading to release of boiling water and causing a burn injury

Patients with burn injuries resulting from hot water bottle use were identified between the periods of January 2004 and March 2013. Burns affect 3.2% of the South African population annually. Scalds are by far the most common cause, accounting for 52 – 78% of patients, identified cases involved 39 children (aged 17 years or younger) and 46 adults (aged 18 years or older). The majority of burns were scald injuries. Seven patients required debridement and skin grafting while 3 required debridement and application of grafts. One patient required local flap reconstruction.

All blisters should be left intact to minimize the risk of infection.

- Larger blisters or those in an awkward position (in danger of bursting) should be aspirated under aseptic technique by a Health care professional
- Non-adhesive dressing, with gauze padding is usually effective, but biological dressings are better, especially for children.
- Dressings should be examined at 48 hours to reassess the depth.
- Dressings on superficial partial-thickness burns can be changed absence of infection.
- If infection occurs, daily wound inspection and dressing change is required.
- Ensure adequate analgesia (Pain killers) is taken.