

A burning issue (answers on page 46)

Part one

Mark, a 10-year-old boy had been helping his mother in the kitchen when he accidentally spilled hot oil over his foot. His mother, knowing first aid, ran cold water over his foot for a quarter of an hour, then wrapped kitchen cling film around it before bringing him to the clinic. You, as a junior doctor, are the first to see him. He is still in pain, and you find that the scald extends over an area of 5 cm x 5 cm on the top of his foot. It is covered in a large blister and several small ones.

- Q** What should be your first actions?
- To leave the blisters as they are, and cover the burn until it can be assessed by an experienced burns specialist.
 - To give a painkiller and sedative.
 - To arrange for a drip set to be made ready for intravenous fluids.
 - To carefully remove the blisters with sterile scissors and forceps and assess the state of the skin beneath.

Part two

- Q2** Once the blisters have been removed the skin is found to be pink and moist. It blanches when gentle pressure is applied to it with a gloved finger and Mark says that he can feel your touch. What is your assessment of the state of the injury?
- It covers less than 1% of the body surface area.
 - It is nearer 5% than 1%.
 - Blistering means that it is a whole skin thickness burn – a second-degree injury.
 - It is a superficial burn that will probably heal without serious scarring.
 - Even if it heals perfectly the normal skin pigmentation may not return.

Part three

- Q3** Once the burn has been dressed, Mark is still distressed and not wanting to eat or drink. How would you consider treating him further?
- He needs intravenous fluids to restore his fluid balance and to counter any continuing fluid loss.
 - This is a superficial burn that needs only daily dressings and he can return home with no need for follow-up.
 - You need to seek advice about Mark from a specialist burn centre as burns on the feet may present particular problems in the future.
 - Once he has settled he can go home, but should return to the clinic for daily dressings until the foot is healed.
 - Keep him in the clinic at least overnight to monitor him for acute complications, then arrange for daily follow-up.

Part four

- Q4** What are the possible short- and long-term complications for Mark's burn?
- Infection.
 - Keloid scarring.
 - Hypopigmentation.
 - Hyperpigmentation.
 - Toxic shock.

Part five

- Q5** What are the differences between adults and children in outcomes of relatively small burns like this?
- There are none, really: the treatments and outcomes for adults and children are similar.
 - Healing in children is faster and leaves less scarring than in adults.
 - There are fewer serious complications in children.
 - Toxic shock syndrome is not a complication often seen in children – it is more often seen in adults.
 - Even small burns like Mark's can give rise to toxic shock – and it can be fatal.