

Case Study 1 – Shadrack

Patient was presented to the dressings clinic at Coast Provincial General Hospital Kenya in November 2011 by the Diabetes Clinical Officer. The patient was 11 years old and had a 5-year history of Diabetes Type 1. The patient complained of pain from the top of both legs at the front.

The patient was attending for a scheduled check up and counselling – around once per quarter with the Clinical Officer, when he was diagnosed with multiple injection site abscesses. On examination there were many abscesses over both limbs. Some appeared more “ripe” than others and similarly some were more painful than others. The larger abscesses appeared more ripe and were the most painful to palpate. The CO made the clinical decision to lance and drain the “ripe” abscesses and monitor the remaining ones.

The largest abscess on the left leg was lanced in a sterile field with a disposable No. 15 surgical scalpel on the day of diagnosis. The abscess was treated under local anaesthetic, however the patient was still in notable pain. Lancing did not release the puss and the patient would no longer comply due to pain. As a result, a venflo was employed to access the pocket of puss and draw the puss out with a syringe. After lancing, draining and cleaning I was asked to take over managing the wounds in the dressings clinic. In the meantime the puss drained from the wound was sent for culture and sensitivity and a broad spectrum antibiotic was prescribed.

The wound was cleaned with 10% betadine solution and dressed with Mepilex Ag, conforming bandage and mifix strapping. Mepilex Ag was used as it was available and the wound was assumed to be infected due to the presence of yellow/green puss. Prior to dressing the patient was also treated with a Photoizo Light therapy device on the “infection setting.”

The patient did not live within easy reach of the clinic and so his parents were taught how to clean and dress the wound with the available resources. The patient then attended the dressings’ clinic one week later.

The patient’s parents were provided with the basic supplies available to manage the wounds at home. They were given disinfectant hand wash, betadine solution 10%, sterile gauze, mepilex Ag, conforming bandages and mifix tape to secure the dressing. They were taught how to wash their hands and create a clean field to work in, then how to clean the wound and apply the new dressing to the wounds.

Dressing Appointment 1 week later

On examination the initial wound still contained puss and several of the lesser abscesses now looked more ripe and ready for draining. These abscesses were drained using only the venflo by the clinical officer and then cleaned and dressed as before. Similarly, the light therapy device was used. The result of the puss swab sent for culture and sensitivity revealed that there was no infection and that the abscesses were sterile. Once again, the patients and his parents were again given advice on how to clean and dress the wounds and any questions answered. The patient was then to be seen at the clinic in three weeks.

Sterile abscesses are usually caused by non-living irritants such as injected drugs and not living irritants such as bacteria. In this case it appeared the patient had been injecting his insulin at a 45 degree angle into the muscle and not a 90 degree angle. This caused the insulin to remain as a bolus under the skin and not be absorbed by the body. Further to this, the body's inflammatory process walled off the drug during the inflammatory process the abscess was formed.

Treatment usually involves draining the abscess and dressing the resulting wound.

10 days later

The patient was unexpectedly met at a children's' diabetes camp run in the area by the Diabetes Management and Information Centre. Selected children with diabetes in Kenya are offered the opportunity to attend a camp within their region once per year. The camp is set in a local hotel and aims to provide respite for parents, enhanced social time for the children and in addition to teach and support children in dealing with their condition. Children are encouraged to take part in planned activities such swimming and volleyball with their peers. As a result the patient required several temporary dressings due to swimming in the sea several times a day!!

Unfortunately light therapy was not available at this treatment session. The patient did, however, report less pain, and the wounds appeared to be drying out after swimming in the sea twice per day for four days.

The patient was given sufficient resources at the camp to take home and manage the wounds. The patient was advised to attend the clinic in 4 weeks or anytime before if required.

4 weeks later

The patient did not return to the dressings clinic for 4 weeks. When he did, the wounds appeared to have almost completely epithelised, however smaller abscesses previously barely visible on the thighs appeared to be developing under the skin. The patient and his family were managing the wounds well and were advised to attend the clinic 4 weekly until the abscesses had completely resolved.

The prognosis for this patient was good – he received tuition/revision of injection techniques both at the clinic and at the diabetes camp which appeared to resolve the issue of injecting inappropriately. The patient also received a canister to store his insulin in as he did not have a refrigerator at home. This canister was doubled walled and the outer area filled with charcoal and water – this helped to create a cool environment in the interior part where his insulin could be stored at an appropriate temperature. During the time the abscesses were being treated at the clinic he was advised to use his torso and arms as injection sites and there appeared to be no new abscesses forming at these sites at his last visit.