Reposition patients effectively to prevent pressure ulcers

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"Most guidelines recommend that the patient should not be sat upright as this places too much weight on the coccyx and makes the patient far more likely to slide down the bed, increasing the amount of friction and shear."

Despite the widely available guidelines[1,2], there still remains considerable confusion in practice about how and when to reposition patients. The mantra of 2-hourly turns still remains a common theme, although there is little evidence to support this frequency. One trial compared the cost of 2-hourly turns with 4-hourly turns and concluded that, despite a small clinical benefit of turning the patient every 2 hours, the cost was significantly more and this outweighed the benefit[3].

For most patients, 2-hourly turns are too frequent, while others need to be repositioned at shorter intervals. The turning schedule should be individually prescribed for each patient based on his/her main risk factors and his/her ability and/or willingness to reposition themselves. The patient becoming aware of why they are being repositioned may mean they move themselves more frequently. Ensuring the patient's pain is well controlled can positively influence the frequency with which they reposition themselves[4].

There is sometimes a need for a different turning frequency at night compared with daytime; healthy people reposition themselves less frequently overnight, however, this recommendation can not be applied to all patients. Patients taking sedatives can become particularly still and the need to reposition them remains the same.

For patients who are considered at the end of their life, additional consideration should be given to the benefit of the repositioning when balanced against the possible effects on pain and dignity. This does not mean that repositioning should be abandonded simply that a more careful consideration given to the decision and perhaps be greater discussion with the patient and their family and/or carers about the positive or negative effects of repositioning.

While the NICE guidelines[2] suggest basing the frequency of turn on the type of mattress a patient is on, the most objective way of determining repositioning frequency is by checking the skin when the patient is repositioned. If the skin is red and the redness does not resolve within a short period (non-blanching erythema), the turns are too infrequent; if the skin returns to its normal colour quickly (blanching erythema), the turn frequency may be extended to allow the patient greater comfort and less disturbance. If it is difficult to see if the skin does or does not blanch, a plastic disc or square can be used that allows the skin to be seen more clearly *[Figure 1]*.

Recently, several devices have been brought to market to assist in decision making around repositioning. These include a mat that is placed under the patient that shows the interface pressure beneath the patient, using colours on a digital display at the bed end. While this demonstrates high points of pressure allowing shifts in patient position to redistribute weight more evenly, it does not show the patient's response to the load and, therefore, the skin should still be checked. A further innovation is a device that measures subepidermal moisture levels in the skin via the use of a handheld scanner. This device has been shown to identify early signs of pressure damage up to 3 days prior to visible signs becoming obvious on the surface of the skin. However, neither of these devices are widely available due to the perceived cost and the need for additional training, so skin observation remains the best way to judge repositioning frequency.

It is important to remember that patients are repositioned for reasons other than pressure ulcer prevention. Generally speaking, the 30-degree tilt position is recommended. This avoids putting the patient directly on their back or their hip as this would be placing the weight onto large bony prominences and, therefore, considerably increasing their risk. The 30-degree tilt can be simply achieved using pillows or wedges and allows the body weight to be supported on large muscles, such as in the buttocks. To check the patient is correctly positioned, a hand should be slid between the patient and the mattress, and it should be possible to feel that the coccyx and sacrum are not on the bed. It should also be possible to see both hips. The patient's legs should be carefully supported to ensure the patient is comfortable and does not feel twisted and unsupported.

For patients who are able to tolerate lying on their front, the prone position is a good way of completely removing pressure from the back of the patient, although generally, most patients are only able to tolerate this for short periods of time. However, more patients may be able to tolerate the recovery position and inclusion of these

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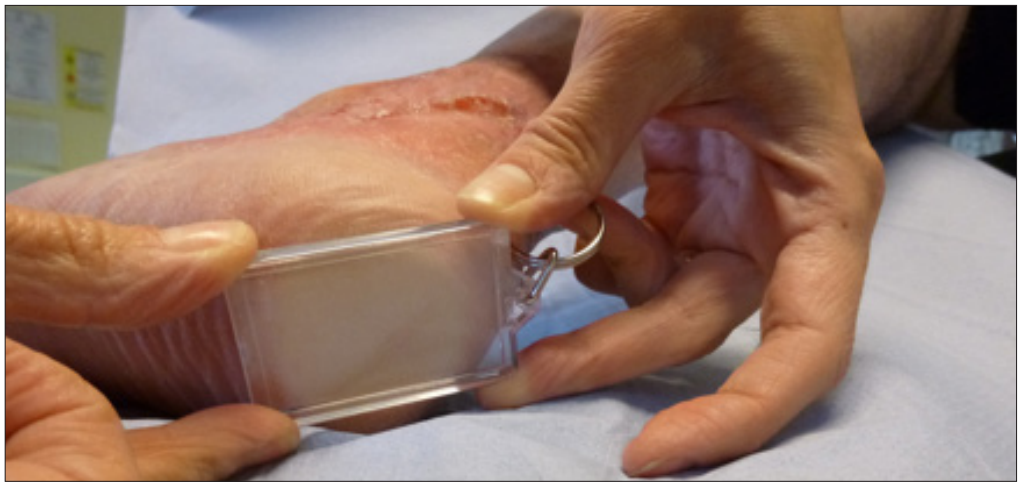

Figure 1. Image shows blanching erythema through the plastic.

extra positions, even if only for short periods, allows skin on other areas of the body to recover from applied pressure more effectively. It is always worth asking the patient how they sleep at home as they should vary their position.

In addition to considering the movement from side to side, care should be taken with the angle of the head of the bed. Most guidelines recommend that the patient should not be sat upright as this places too much weight on the coccyx and makes the patient far more likely to slide down the bed, increasing the amount of friction and shear. The maximum elevation should be 30 degrees.

Repositioning when on very high risk surfaces

Even when a patient is on the most sophisticated surface, consideration should be given to repositioning them. However, care should be taken to not block the beneficial effects of the mattress by placing unnecessary equipment between the patient's skin and the surface.

Repositioning in the chair

If a patient requires repositioning in bed then it is also likely that they will require repositioning in the chair. It is possible to use the 30-degree tilt in a chair, however, space for pillows can be very limited and there may be safety concerns around the height of the sides of the chair. Where possible, patients should not be left in their chairs for long periods of time. When they are seated, functional movements should be encouraged, for example, leaning forward to reach for a book or a drink (obviously ensuring the patient is safe from falling) or simple moving from side to side, transferring the weight from one buttock to another.

Repositioning heels

Heels are perhaps one of the most difficult areas to reposition, being largely comprised of bones with very little cushioning from fat. Where possible, the heels should be floated i.e. lifted clear of the surface, ensuring that however this is achieved, increased pressure is not put on the Achilles tendon or the calf. The most common way of offloading heels is to use pillows, however, once the patient has been positioned on them they should be rechecked after 20 minutes to ensure the weight of the leg has not collapsed the pillow, resulting in the heel now being back on the mattress. There are many different offloading boots available and when choosing between them, consideration should be given to several things, such as:

- How mobile is the patient? Some boots significantly reduce mobility and levels of independence
- What material is the boot made of? Some materials can be hot and uncomfortable
- How is the boot secured? Tight fastenings can cause skin damage, particularly if the patient has lower-limb oedema
- Is the boot available in a range of sizes? Patients' feet and legs can range considerably in size
- Is it possible to check the skin condition without removing the boot? Although this is not a crucial factor if the patient is in pain, it may help to not have to keep removing the boot.

Not all patients find boots comfortable. Some prefer to have their heels elevated using wedges to allow the heel to be floated. This is more common in patients who have some

independent movement as they can find boots a little restricting.

A simple way to check that the heels are fully offloaded is to put a sheet of paper underneath them — if it can be pulled out without ripping it is unlikely that the heels are resting on the surface.

Moving and handling

When repositioning a patient, care must be taken to ensure that the patient is not caused pain, therefore, appropriate analgesia should be given if required. Moving and handling aids should be used even if only making small movements to reduce both pain and superficial skin damage from dragging. The heels are frequently forgotten when repositioning patients and even if simply elevating the head of an electronic bed frame, a slide sheet should be put underneath them as they can move up to 15 cm along the surface during the movement[5].

Conclusion

Repositioning for patients should be an individualised plan as many different factors need to be considered. The condition of the skin and patient comfort are particularly important, as is the broader objective of their care. While 2-hourly turning appears to still be common practice, it is not always in the patient's best interests and it should be considered as only one element of their care in preventing pressure ulcers. Repositioning should be a 24-hour consideration, not simply something that happens when the patient is in bed. WINT

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