My hands are stiff and clumsy and they seem to be getting worse. I am finding it difficult to do my job.

Question 1
What is the problem?

Question 2
What other problems may be associated?

Question 3
What can be done to help Janis?

Answer 1
This is common in diabetes, particularly type 1, and is easily overlooked. The ‘praying sign’ (Figure 1) tests whether the joints are flexible enough to allow a 90° extension at the wrist with the fingers in the neutral position.

The soft tissue contracts and limits movement of the fingers, particularly the fourth and fifth fingers. Other joints can also be affected. There is no active inflammation or destruction but movement may be severely limited. There may be some pain and discomfort as attempts are made to move the joints beyond their now limited range of motion. Thickening of the skin may also occur, particularly in the palm and over the fingers and may make taking blood samples for self blood glucose monitoring difficult.

Answer 2
In diabetic cheiroarthropathy the skin feels thick and spongy and there may be some loss of sensation and associated clumsiness because of the thickening. The soft tissue thickening and contractures may cause nerve entrapment syndromes. This is more likely when there is a ‘double hit’ of diffuse sensory diabetic neuropathy as well as pressure in the ‘tunnels’; the nerves are traversing – commonly, the median nerve at the wrist (carpal tunnel syndrome) or the nerve at the elbow or peroneal nerve at the ankle (tarsal tunnel syndrome).

There are two other conditions affecting soft tissue that are more common in diabetes and may contribute to ‘stiff hand syndrome’:

- Dupuytren’s contracture is a thickening of the palmar fascia causing flexion deformity of the ring – and sometimes little finger – and is three times more common in diabetes. It is not related to diabetic cheiroarthropathy and the thickening is nodular or plaque-like rather than diffuse
- Flexor tenosynovitis is associated with a thickening of the flexor sheath and causes swelling in the palm and fingers. The rings may become tight and the hand and fingers may ache and be tender.
severe cases the tendon is caught in the sheath causing a sensation of clicking with movement or trapping of the tendon until extra force releases the tendon (the so-called ‘trigger finger’).

It is thought that the thickening is caused by glycation of connective tissue (just as glucose binds to haemoglobin to produce the glycated haemoglobin or HbA1c that we measure, so glucose binds to other proteins in the body). This glycation and subsequent modification with cross linking of proteins may contribute to diabetic complications and the soft tissue thickening and contracture in diabetic cheiroarthropathy.

Although this particular form of soft tissue thickening seems specific to diabetes and rarely occurs before 5–10 years of diabetes onset, there is no real relationship to glycaemic control. It is always advisable to improve glycaemic control if this is acceptable to the patient and does not impose too much of a burden in terms of self care, hypoglycaemia or weight gain. However, improvement in the cheiroarthropathy should not be expected or promised.

There are medications under trial that inhibit the cross linking glycation and may reduce the incidence and progression of complications including cheiroarthropathy. In the meantime, symptomatic treatment is all that is available. A physiotherapist or occupational therapist can often give useful advice about exercise and splints to preserve and improve function and to reduce symptoms. Surgery will reduce pressure on trapped nerves and improve sensation and discomfort, although some residual problems may remain.

Conflict of interest: none declared.

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Poetry

The complex

A buzzer and a red light go, when
I can turn the handle on the outside face
glass door. The next one needs the clanking
keys, and slamming with conviction
shudders my internal organs.

Into the gaol’s innards
through barbed doors, peephole doors,
chang
and blang, each with the message,
you have entered
the parallel universe, now the building
is in charge.

To the man who’s bad or mad
or both. To find a path in and out
squeeze in between his motives
or delusions
avoiding snags on lies and my morality, to
understand his part in what he’s done.

His window, an iron grate, the Antarctic
wind blows in. Toilet seat of stainless steel
so cold, he goes without sitting down.
He killed
for cash, a commercial undertaking.
There’s no room to manoeuvre.

In the expedition out, I
wait for keys to come at every step
the glass door, now only for the rolling gate.
Then, the bricks consider keeping me
and I promise to be good.

Saxby Pridmore

Prison’s psychological boundary might be
walls of empty prejudice; but the building
directs our passage into the labyrinth,
where the Minotaur of madness, and
Charon the ghastly ferryman of death
impose their rule: You Must Decide. The
poet opts for verse that is structured, yet
free, and a quick exit.

Tim Metcalf

Figure 1. The ‘praying sign’ tests