

## Air guitarist's knee — a new musical injury

Robert J Douglas and Jason Ward



### Clinical record

In May 2009, a 17-year-old woman in the dance floor audience at a rock concert was performing “air guitar” — a form of dance and movement in which a performer mimes to rock or heavy metal guitar music, commonly requiring enthusiastic jumping and leaping about a “stage”. While performing a manoeuvre involving a jump into the air, she landed awkwardly on her right leg. She noted immediate intense right knee pain with obvious patellar deformity. An ambulance was called, and a dislocation of the right patella was diagnosed. Under methoxyflurane inhalation, ambulance officers reduced the dislocation by manoeuvring the knee into full extension.

On arrival at the emergency department, the patient complained of pain “everywhere” in the knee. There was no obvious swelling or deformity of the knee joint. There was tenderness over both the medial and lateral collateral ligaments, with minimal patellar tenderness. She had full painful range of movement. Radiological examination of the knee showed a joint effusion with lateral subluxation of the patella. There was a 2 mm ossicle lateral to the lateral femoral condyle, which may have represented an acute avulsion fragment. A compression bandage was applied, and the patient was discharged with analgesia and crutches, with follow-up to be undertaken with her general practitioner.

The patient re-presented to the emergency department 36 hours later with a painful and swollen knee joint. After discussion of treatment options with the patient and her mother, a decision was made to proceed to arthroscopy. At arthroscopic debridement, a tense haemarthrosis was released. A bleeding point was identified at the patellar attachment of the torn medial patellofemoral ligament. A synovectomy of the affected area was performed, and haemostasis of the local bleeding vessel was achieved with diathermy (Box). There was minor chondral damage about the medial patellar facet. Other joint structures were intact and there was no fracture.

### Rock music may be bad for your knees as well as your ears

The patient had an uncomplicated recovery with routine postoperative care. At 3-week review, she was able to walk comfortably unaided. There was minimal effusion and she had a full range of movement. She was prescribed a muscle-strengthening program and referred to a physiotherapist, and she made a full and uneventful recovery.

### Discussion

Dislocation of the patella is an injury more commonly seen in young athletes and usually spontaneously reduces at the time of injury.<sup>1</sup> There has been no report in the medical literature of a knee injury sustained during a musical performance.

Although the literature

describes several maladies

attributed to guitar

playing, such as wrist

injury,<sup>2</sup> overuse

injury to the dig-

its,<sup>3,4</sup> and irritation

of the skin second-

ary to exposure to

the instrument's

surface,<sup>5-7</sup> there are no

reports of an acute

physical injury due to

guitar playing. There is a single

internet report of an acute injury

sustained while playing a guitar-like

instrument — an avulsion injury of the

lateral condyle of the left femur, incurred

while playing the video game *Guitar Hero*.<sup>8</sup>

An internet search using Google found

numerous reports of acute injuries attributed

to the performance of air guitar. The *Chicago*

*Sun-Times* reported an unspecified back

injury to the

reigning Chi-

cago Region

Air Guitar

champion,<sup>9</sup> while

the winner of the United

States Air Guitar regional competition

in Brooklyn “rocked so hard during a daredevil per-

formance that doctors had to amputate a toe she

broke during the gig”.<sup>10</sup> There are also reports of a

knee injury as a result of jumping from a

height during a performance and an ankle

injury sustained after jumping from

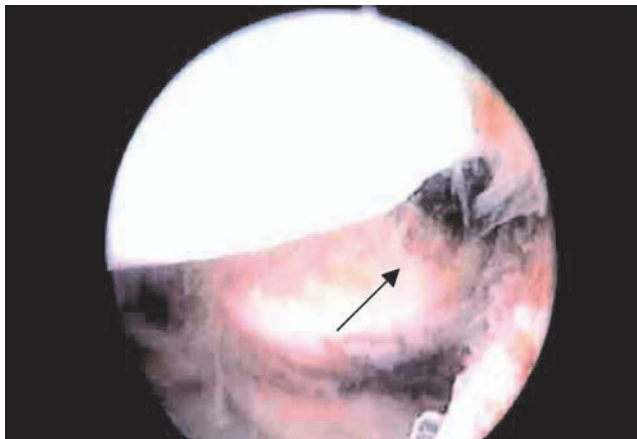
speakers.<sup>11</sup> There has even been

a report of death due to

air guitar — a stu-

dent in Singa-



**Arthroscopic photograph of the knee joint**

Diathermy-treated bleeding point within the medial patellofemoral retinaculum (arrow). ◆

pore fell to his death from a building when he was “jumping up and down on the bed placed against an open window while mimicking a rock guitarist”.<sup>12</sup>

Our case suggests that injuries due to the performance of air guitar are a source of previously unrecognised and unreported morbidity and demonstrates that, even though the instruments used in air guitar are imaginary, the injuries sustained are quite real. Rock music may be bad for your knees as well as your ears.

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**Competing interests**

None identified.

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