

Technical note

Use of a syringe as a drill sleeve for core decompression of the femoral head in osteonecrosis

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Core decompression is one of the treatment methods (Camp and Colwell 1986, Hungerford 1988, Hopson and Silverhus 1988, Arlet and Ficat 1990) for stage I and II osteonecrosis of the femoral head (Steinberg et al. 1995). In core decompression, the osteonecrotic part of the head is drilled and the bone tissue is removed. The power drill requires a drill bit that is thicker in diameter than conventional drill bits, so there are no drill sleeves available for the protection of the soft tissues. As a skin incision of minimal size is used, the drill very often leads to soft tissue injury of the skin, fascia lata and vastus lateralis muscle. We describe a simple method of using a syringe to avoid this complication. We could not find this method described in a search of the current literature.

The patient is positioned supine on a fracture table, and under fluoroscopic guidance a 15-mm lateral incision is made in the skin inferior to the

greater trochanter. The bone is exposed in line with the incision. A guide wire is then passed through the femoral neck to the part of the femoral head which is osteonecrotic. Normally the drill is passed over the guide wire, in direct—damaging—contact with the soft tissues surrounding it. We improvise a drill sleeve by cutting the tip-end from the barrel of a 5-mL syringe using a scalpel blade on the instrument table (Figure 1). The sleeve fits snugly over the drill bit and provides excellent protection whilst drilling (Figure 2).

The sleeve can be readily fashioned during surgery with no special equipment. The syringe is radiolucent and therefore does not interfere with image intensification. Furthermore, we suggest that if bone grafting is required, the syringe can act as a portal, and the plunger of the syringe can be used to introduce the bone graft whilst maintaining a minimally invasive technique.



Figure 1. Drill sleeve prepared from a syringe.

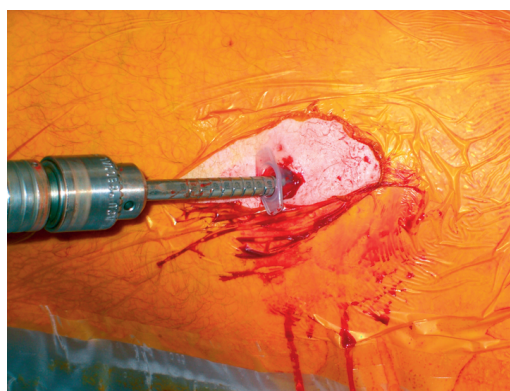


Figure 2. Drill sleeve in position.

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