

Appendix 1

Detailed description of the intervention in the three study groups.

The procedure was performed with the patient placed in a supine position with the arm internally rotated (hand behind the back). After sterile skin preparation, with the ultrasound transducer wrapped in a sterile drape, and by using sterile jelly, the deposit was identified, usually on the lateral transversal view. Under continuous sonographic guidance and with freehand technique, a 21-gauge needle was introduced into the subacromial-subdeltoid bursa, and the pathway and the bursa were anesthetized with 10 ml of 1% lidocaine hydrochloride with adrenaline 5 µg/ml. In patients randomized to lavage+steroid a new 18-gauge needle connected to a 5 ml syringe with 4 ml of saline solution was used to puncture the calcification under sonographic monitoring. The tip of the needle was placed in the center of the deposit and the calcification was flushed. If backflow of calcific material was identified in the syringe, lavage of the deposit was performed by successive propulsion and aspiration with the syringe plunger. To avoid reinjection of calcium the syringe was substituted when the fluid had become cloudy, and the procedure was repeated until the backflow became clear. At the end of the procedure the content of the syringes was poured into a measuring cup and, when settled at the bottom of the cup, the volume of the extracted calcium was estimated. In cases where no material could be extracted, repeated perforation of the deposit was performed to initiate or accelerate spontaneous resorption.

In patients randomized to sham lavage+steroid and to sham, the tip of the 18-gauge needle was placed in the soft parts outside the rotator cuff, and the lavage procedure was mimicked for about 5 minutes which corresponds to the time needed for a lavage procedure.

Finally, in all three groups, under sonographic monitoring, a new 21-gauge needle was introduced into the subacromial bursa and 1 ml of triamcinolone 20 mg/ml and 9 ml of lidocaine hydrochloride 10 mg/ml (in the lavage+steroid and the sham lavage+steroid group) or 10 ml of lidocaine hydrochloride 10 mg/ml (in the sham group) were injected.