

Innovative treatment of retractive capsulitis at the Erasmus Hospital.

Clinical cases



HÔPITAL UNIVERSITAIRE
DE BRUXELLES
ACADEMISCH ZIEKENHUIS
BRUSSEL



Department of Interventional Radiology

Introduction

Adhesive capsulitis, commonly known as frozen shoulder, is a pathology that affects between 2% and 10% of the population (with a slight over-representation of women) and with an incidence that peaks between the ages of 40 and 60. There can be many causes, either idiopathic or secondary to a systemic pathology (diabetes, hormonal disorders) or a health issue that is extrinsic (breast surgery, cervical radiculopathy, tumour of the thoracic wall, stroke, fracture, arthrosis) or intrinsic (rotator cuff tendinopathy, impingements, calcifying tendinopathy).

The symptoms develop in stages over several months or years (up to 3 years). There are three discernible stages. During the first stage, the pain increases progressively and is associated with a low restriction of movement. The second is the “frozen” stage when the pain symptom remains present and movement restriction increases to the point of a paroxysm. Stage three corresponds to a progressive recovery of shoulder movement and pain reduction.

Introduction

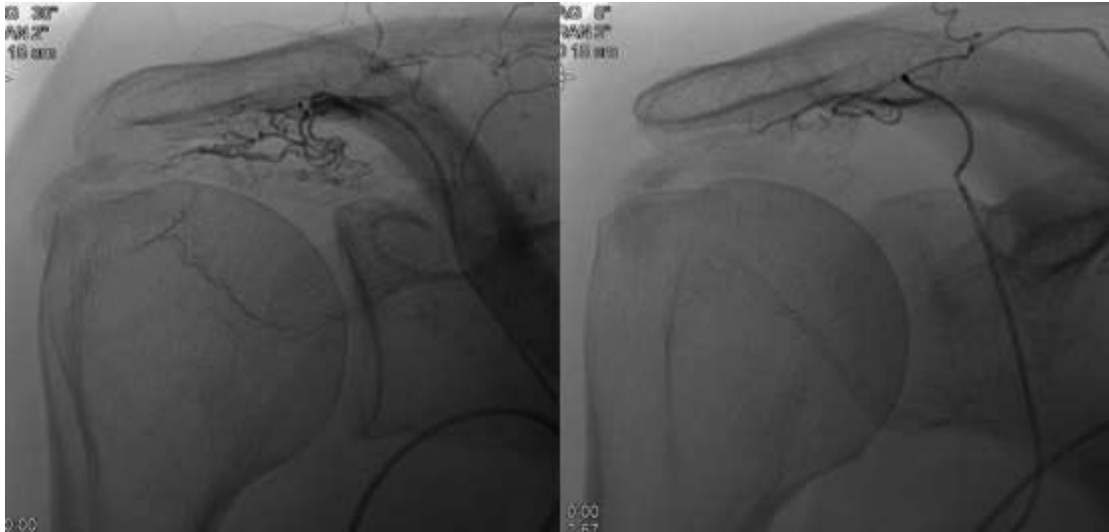
The diagnosis essentially rests on clinical criteria and anamnesis. Imaging can assist the diagnosis by revealing certain signs, visible depending on the method used, and including: thickening of the coracohumeral ligament, capsular thickening, weak joint distension, inferior glenohumeral signal anomalies, synovial hypertrophy and presence of scar tissue. The imaging also makes it possible to participate in the differential diagnosis and the search for a potential etiology.

Present treatment includes the administration of analgesics, physiotherapy, cortisone injections, arthrographic distension, surgical release or suprascapular nerve block. Despite this multimodal treatment, the pathology can develop slowly, bringing a significant impairment of quality of life and prolonged incapacities.

Procedure

In recent years, embolization of adhesive capsulitis has developed as a new therapeutic approach, reducing inflammation and limiting the blood flow in the pathologic zones. This endovascular procedure is minimally invasive and is performed via the radial artery with a selective catheterization of the problematic arteries and progressive injection, in an angiography room under scopic control, of particles (resorbable or otherwise). This makes it possible to reduce pain and improve shoulder movement during the months following the procedure. Possible side effects (hematoma, temporary skin discoloration, transient erythema, post-embolic pain, pyrexia) are rare, minor and temporary.

Case 1

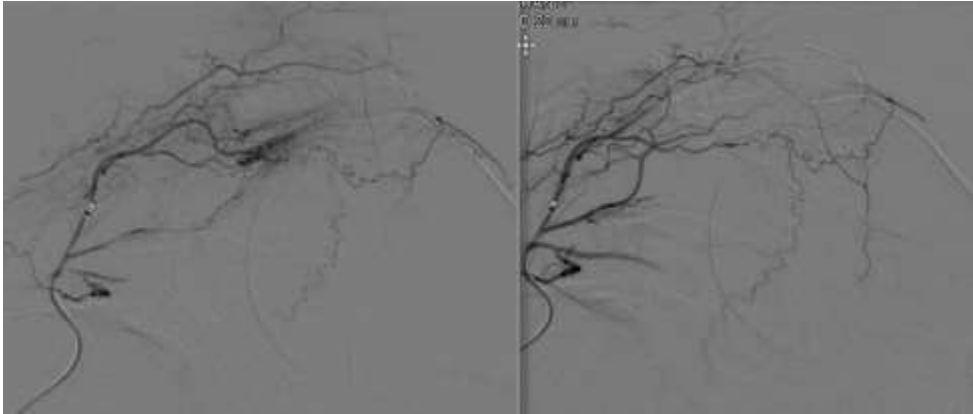


Selective catheterization of the right thoracoacromial artery with pre- and post-embolization images.

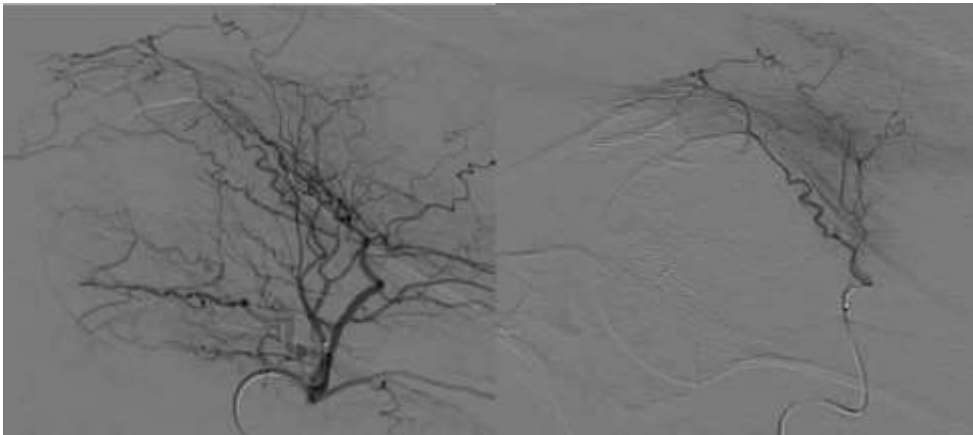
Female patient aged 56 presenting an adhesive capsulitis for almost 2 years with intense persistent pain and restricted movement. Treatment to date included analgesics, antidepressants, physiotherapy (more than 100 sessions), injections (more than 10 cortisone, PRP and salmon calcitonin injections) and 2 arthrographic distensions. The persistent symptoms justified proposing this new therapeutic approach.

Via right radial access, the arteriography revealed a neovascularisation (tumour-like blush) of the superior capsule and selective catheterization was performed of the thoracoacromial artery through to a distal point with embolization with the aid of calibrated and non-resorbable 200 micron particles. There were no complications. The follow-up after 2 years showed the pain had disappeared and an ad integrum restoration of the scapular mobility.

Case 2



Selective catheterization of the thoracoacromial artery, with pre- and post-embolization images.



Selective catheterization of the artery and left posterior humeral circumflex, with pre- and post-embolization images.

Female patient aged 59 presenting an adhesive capsulitis for 4 months characterised by intense pain associated with restricted movement. The analgesic treatment and physiotherapy failed to control the symptoms that were progressively worsening. The patient consulted the interventional radiology team on her own initiative.

The arteriography via left radial access showed a typical neovascularisation (tumour-like blush) of the superior capsule and humeral periostitis. A selective catheterization of the thoracoacromial arteries and of the posterior humeral circumflex permitted embolization with the aid of calibrated non-resorbable 200 micron capsules. At the immediate post-procedural stage the patient presented a temporary skin discoloration and post-embolization pain for which an analgesic treatment was maintained for a few days. Without any other undesirable effect, follow-up at 15 months showed a sustained resolution of symptoms and, according to the patient, a very clear improvement in her quality of life.

Conclusions

These two cases show encouraging results, in line with those described in the literature.

This treatment is now available at the Erasmus Hospital and prospective evaluations are in progress as part of a multidisciplinary approach by rheumatologists, orthopaedic surgeons and interventional radiologists.

FOR MORE INFORMATION

PLEASE CONTACT OUR DEPARTMENT OF
INTERVENTIONAL RADIOLOGY

coordination.ri@hubruxelles.be

SecMed.RI@hubruxelles.be

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