DISTENSION ARTHROGRAM

Introduction

Adhesive capsulitis is an idiopathic condition characterised by pain and contracture of the capsule of the glenohumeral joint. It is generally a self limiting condition taking on average about 18 months to 2 1/2 years to resolution or minimal symptoms. The aim of Distension Arthrogram is to speed up the recovery process by reducing pain, improving the range of movement and function. Distension involves the injection of intra-articular corticosteroids under x-ray control and hydraulic distension to stretch and often rupture the capsule to increase glenohumeral movement. Distension techniques have been described by several authors using various substances e.g. saline, local anaesthetic, steroid, contrast and air (Cochrane, 2004) and have been shown to be successful, but there are a lack of RCTs to support its superiority over other techniques (Uppal et al 2015). The procedure is performed under a local anaesthetic, and takes 15 minutes. Patients can go home immediately.

Scope of practice

These guidelines are designed to guide physiotherapists when treating patients following this procedure. These guidelines were produced by a process of systematic review of the current evidence based literature and medical and peer consultation. They were correct at the time of writing. The guidelines should be used in conjunction with the clinical reasoning skills of the physiotherapist and patients should always be treated on a case by case basis.

Aim

The aim of these guidelines is to provide physiotherapy staff with a series of recommendations from the current evidence base to assist them in the management of patients who have undergone this procedure.

Literature Review Question

What is the appropriate post-operative management following distension arthrogram from day of surgery through outpatient physiotherapy in order to maximise outcome?

Results

At the time of writing there was a lack of quality articles on the most appropriate post-operative rehabilitation following Distension Arthrogram. There was 1 double blinded randomised controlled trial (Buchbinder et al, 2007) which demonstrated that an intensive course of physiotherapy for four weeks was beneficial in increasing range of movement in the short term. However, there was no statistical difference in outcomes for pain, function and quality of life and there was no long term follow up.

These guidelines therefore reflect current practice and expert opinion (Shoulder ESP for NHS Lothian).

Recommendations

Phase 1
Initial physiotherapy appointment (usually 1 – 5 days post procedure).

Goals	Recommendations	
Patient education	• Unbiased • Patient focused • In context of most recent evidence	A3
Decrease immediate post procedure complications	• Ice (2) • Advice on Pain relief and anti – inflammatory (1)	B A
Assessment of GH joint. • Function • ROM • Strength • Pain • Compliant with home ex programme (HEP)	Ongoing treatment based on clinical finding and clinical reasoning	B
Initiate early GH joint ROM and HEP.	• Auto assisted Stretches (1) • AROM exercises	A
Maintain Shoulder girdle muscles and movement	• Exercises for scapulothoracic muscles.	B

Patients tend to fall in to 3 groups post distension arthrogram.

Group 1: Have full/almost full return of ROM and are largely pain free.
Group 2: Have a decrease in pain and a small improvement in ROM.
Group 3: Decreased pain, no increase in ROM.

Recommendations for Group 1:

Goals	Recommendations	
Patient self managing shoulder rehabilitation.	• HEP (1) • 1-2 treatment sessions before Discharge and/or optional review to contact department	A

Recommendation for Group 2 or 3 patients who require further intensive physiotherapy:

Goals	Recommendations	
Maximise active ROM	• 4-6 weeks of x2-3 per week physiotherapy sessions. • 6-12 weeks post Distension Arthrogram with manual therapy eg • Active ROM, Passive ROM exercises • Biodex • PAMS- high grade /end range • Stretching • Pulleys	B

	• PNF Hold/Relax • TENS • Soft tissue/ trigger point techniques • Manual Therapy	
Maximise scapulohumeral rhythm	• Exercises for scapulothoracic muscles.	B

Appendix

Levels of Evidence

Evidence from at least one RCT	A
Expert opinions	B

Search Process

Appraisal process: a systematic computer-assisted search of the databases below was completed. The titles and abstracts of all identified studies were assessed to determine whether they were pertinent to the research question. The search results were combined to ensure articles were not duplicated. Existing literature was not discarded however to update evidence a search from 2013 was carried out.

Data Bases:

Databases	Dates	Limitation
Medline	2013-2020	English
Embase	2013-2020	English
Cinahl	2013-2020	English
Cochrane	2013-2020	English
AMED	2013-2020	English
Google	2013-2020	English

Key Words

Distension Arthrography	Physiotherapy
Capsular Release	Exercises
Shoulder Arthrography	Manual Therapy
Distension arthrogram	Mobilisations
Hydrodilation	Surgery
Capsular Distension	Adhesive Capsulitis

Results

Total number of articles selected: 17
Total number of articles discarded: 84
CASPs were used for 1 article.

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Glossary

CASP	Critical Appraisal Skills Programme
ROM	Range of movement
GH	Glenohumeral
HEP	Home Exercise Program

Appendix

Levels of Evidence

Evidence from large randomised controlled trials (RCTs) or systematic review (including meta-analyses)*	A1
Evidence from at least one high quality cohort	A2
Evidence from at least one moderate size RCT or systematic review	A3
Evidence from at least one RCT	B
Expert opinions	C
Laboratory Evidence**	D

**Arbitrarily, the following cut-off points have been used: large study size ≥ 50 patients per intervention group; moderate study size ≥ 30 patients per intervention group.*
*** Arbitrarily added by Lothian Physiotherapy Musculoskeletal Network Group*

Modified from: MacAuley D and Best TM (2007) Evidence-based Sports Medicine. 2nd Edition. BMJ Books. Blackwell Publishing. Oxford, UK.

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