

### Objective

Comparing effectiveness of biomechanical reposition techniques (Modified Milch, Cunningham and Scapular manipulation technique) in patients with an anterior shoulder dislocation.

“The ideal reduction method should be quick, effective, painless and not cause further injury” (Sahin, 2011)

### Introduction

Shoulder dislocations are being treated for over 3000 years and are one of the most common dislocation presentations in the emergency department (ED) [1, 2]. Despite the very wide range of existing reposition techniques there is no consensus on the best method [3, 4]. Most commonly used techniques are based on traction-countertraction and/or leverage [5]. Often procedural sedation and analgesia is used which could lead to complications and long emergency department stays [6-8]. Furthermore these techniques can have potential nerve, vascular and osseous complications [3, 6, 9]. New biomechanical reposition techniques are described but studies about their effectiveness are limited in amount and size [10-12]. We plan to conduct a prospective trial comparing the following biomechanical reposition techniques: Modified Milch, Cunningham and Scapular manipulation technique.

### Method

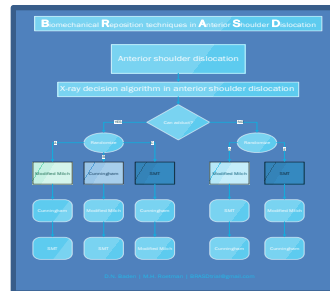
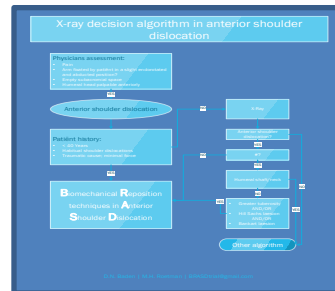
A prospective randomized trial will be conducted in the ED of two Dutch hospitals. We propose to include all adult patients (≥18 years) with an isolated anterior shoulder dislocation presenting to the ED during a two year period. Exclusion criteria are subcapital humeral fractures, multi trauma, subclavicular, intrathoracic, inferior or posterior dislocation and dislocations presented after 24 hours. Depending on ability to adduct patients will be randomized for biomechanical repositioning according to Cunningham, Modified Milch or Scapular manipulation technique and Modified Milch or Scapula manipulation technique. Primary outcome measure will be successful reduction rate. Secondary outcome measures will be length of ED stay and procedure time, patient and physician satisfaction, levels of pain experienced by patient before, during and after reduction and need for additional analgesia and/or sedatives.



Traditional



Biomechanical



### Goal

Results will contribute in designing a more uniform and standard algorithm for treatment of anterior shoulder dislocations in a biomechanical way. Furthermore we anticipate high reposition success rate, high patient and physician satisfaction, low levels of patient experienced pain, short length of ED stay and minimized need for additional analgesia and/or sedatives.

### Reference

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