

# Shoulder dislocations in snowsports

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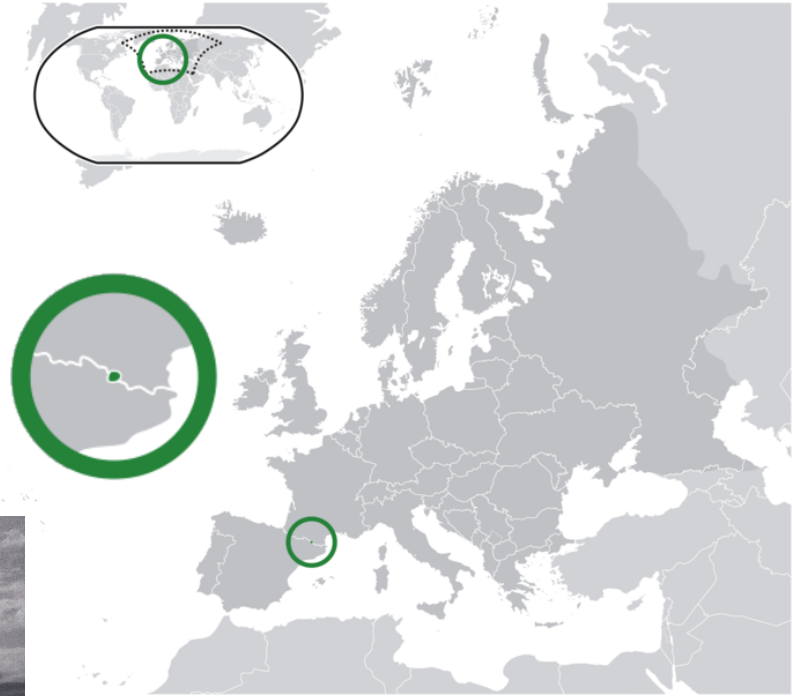
Gonzalez J. Hamilton Intelligence

ANDORRA



# INTRODUCTION

Andorra, is a small country with only 468 square km, 40km from border to border, 70000 inhabitants living from low tax commerce, banking, tourism...



# INTRODUCTION

One of the main sources of income in Andorra is ski industry with 2000 direct jobs and 10000 indirect jobs.



In the last 10 years andorran ski areas received about 2.8 million users/season



# Shoulder dislocations

## **Glenohumeral**

dislocations are often seen during snowsports accidents. This injury can be associated with bone fractures or neuro vascular complications. A significant number of glenohumeral dislocations are recurrent.



# Shoulder dislocations

Quick reduction of  
glenohumeral dislocations can  
be performed at the ski resort  
medical center.



# Shoulder dislocations

**1- general epidemiological data of glenohumeral dislocations in Andorran ski areas**

2- prospective analysis of glenohumeral dislocations treated in our medical center (Pas de la Casa Grau Roig) during the last ski seasons



# Shoulder dislocations

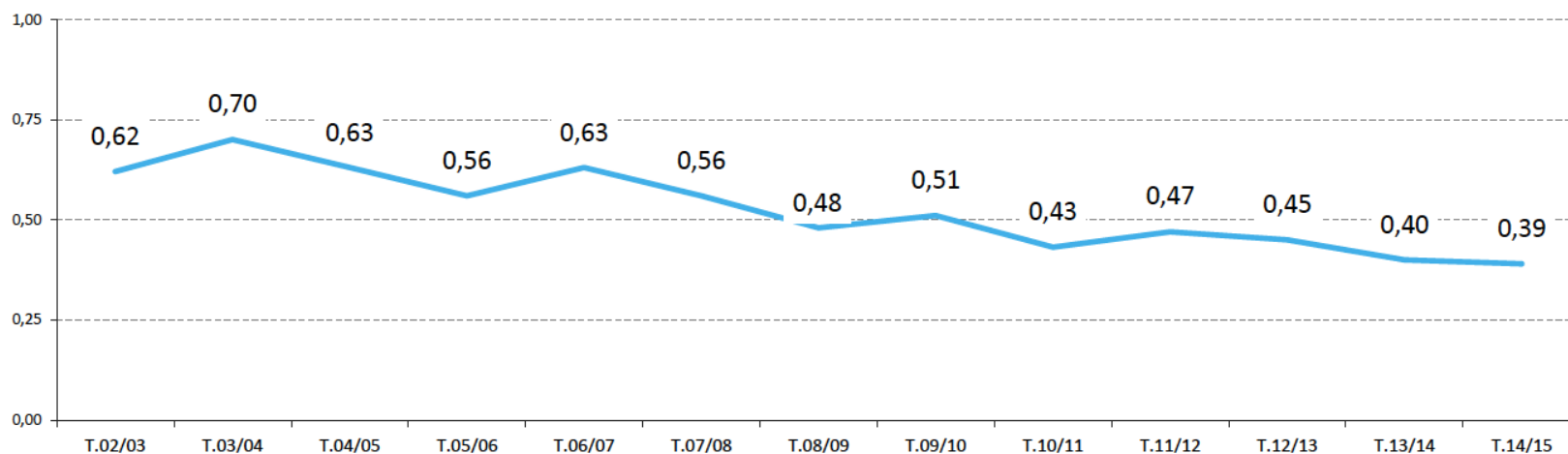
During the past 7 seasons the andorran ski resorts received  
17.684.158 skier days,  
Average: 2.526.308 SD/season

On average 10.091 skiers are injured each season,  
Of which 1.9% has a glenohumeral dislocation



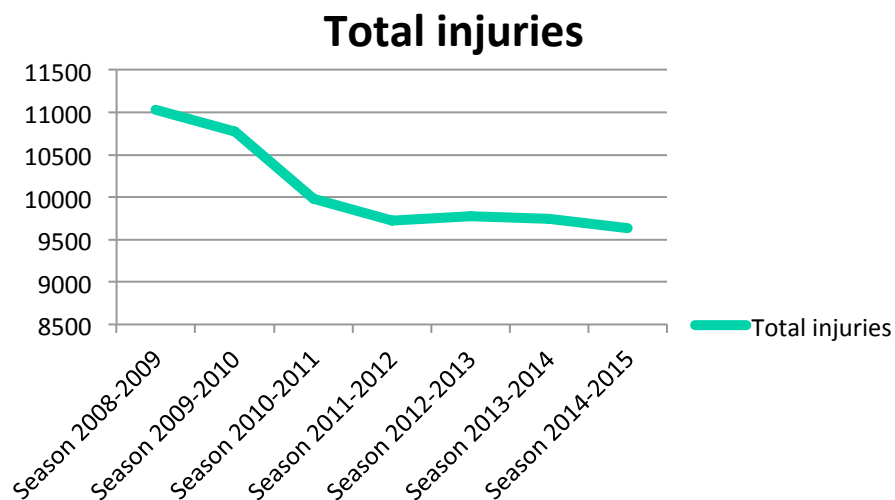
# Shoulder dislocations

Evolution of injury index along the time



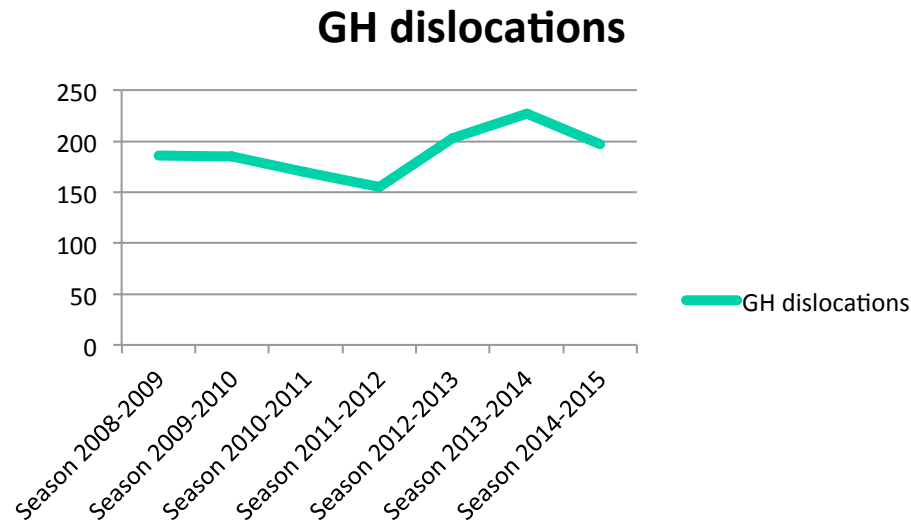
# Shoulder dislocations

Evolution of total injuries during the past 7 seasons



# Shoulder dislocations

Evolution of glenohumeral dislocations during the past 7 seasons



# Shoulder dislocations

percentage of glenohumeral dislocations over total injuries

	% GH / TOT inju
Season 2008-2009	1.7
Season 2009-2010	1.7
Season 2010-2011	1.7
Season 2011-2012	1.6
Season 2012-2013	2.1
Season 2013-2014	2.3
Season 2014-2015	2.0



# Shoulder dislocations

1- general epidemiological data of glenohumeral dislocations in Andorran ski areas

**2- prospective analysis of glenohumeral dislocations treated in our medical center (Pas de la Casa Grau Roig) during the last ski seasons**



# Shoulder dislocations

For the last 4 seasons we decided to conduct a prospective survey in Centre Mèdic Pas de la Casa – Grau Roig:

We registered for our patients suffering from glenohumeral dislocation:

- Age
- Gender
- Ski / snowboard
- Mechanism of injury
- Pain (VAS) at arrival / after treatment
- First GHD or recurrent
- Reduction time /technique
- Signs of nervous or vascular compression
- Presence of fractures



# Shoulder dislocations

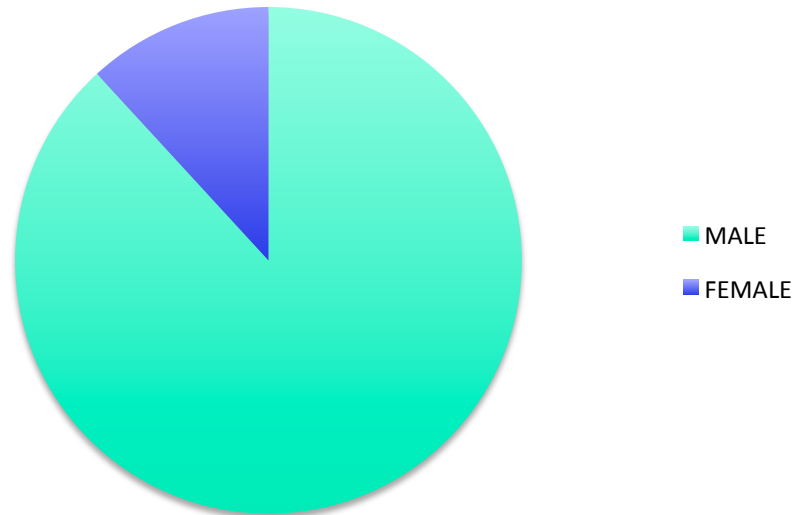
The number of registered GHD is 186, 182 successfully reduced, only 4 had to be sent to the hospital for treatment

The age ranged from **11** (only 7 under 18)  
to **73** year old

The mean age is 34 year old



# Shoulder dislocations



Gender: 88 % male 12% female

# Shoulder dislocations

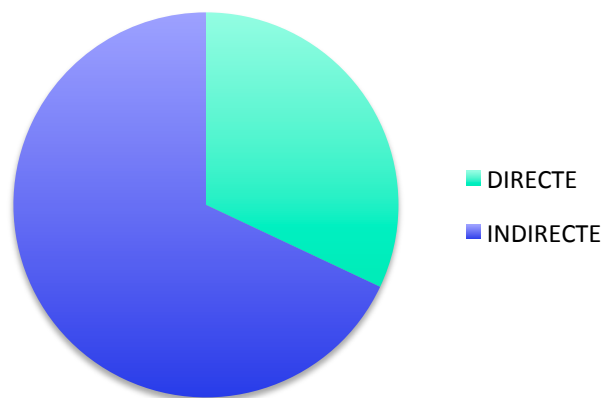


Ski 65%

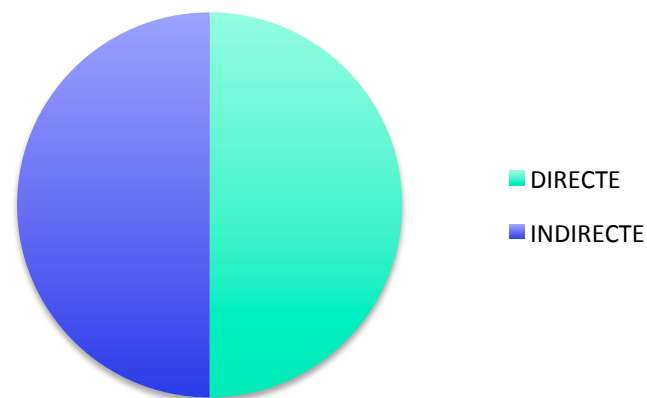
Snowboard 35%



# Shoulder dislocations



Ski 68% - 32%



Snowboard 50% - 50%

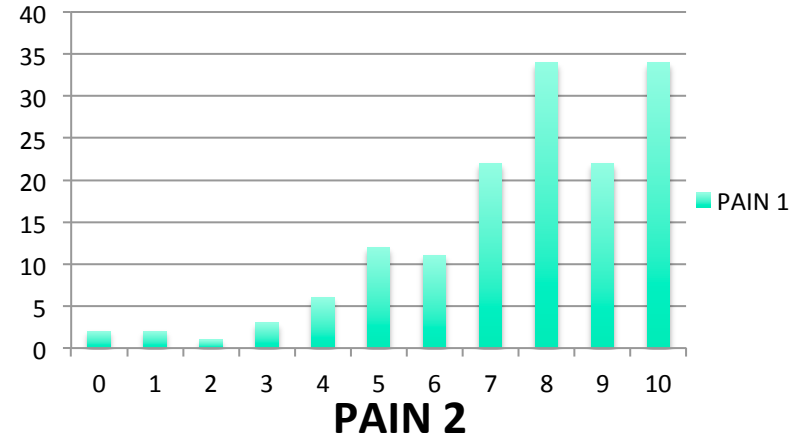
Mechanism of injury



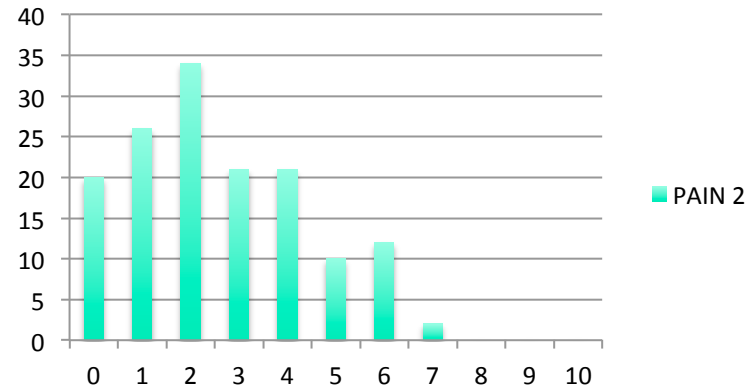
# Shoulder dislocations

Pain at arrival

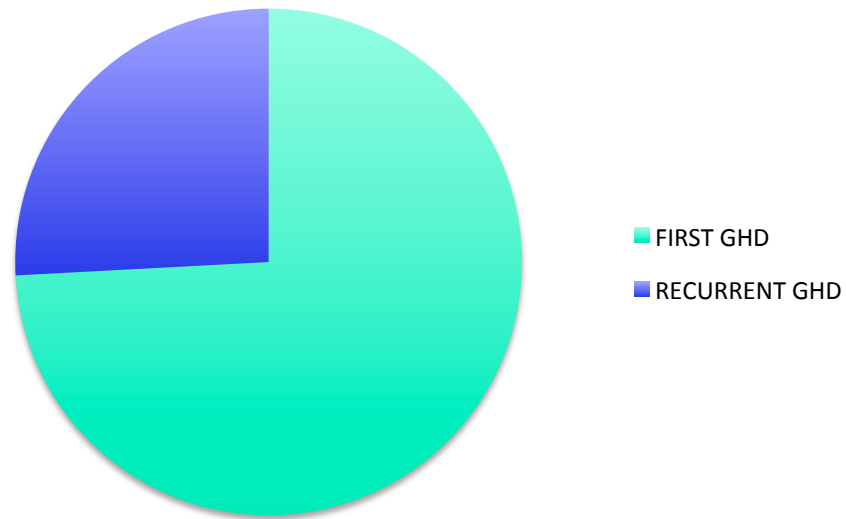
**PAIN 1**



Pain after treatment



# Shoulder dislocations

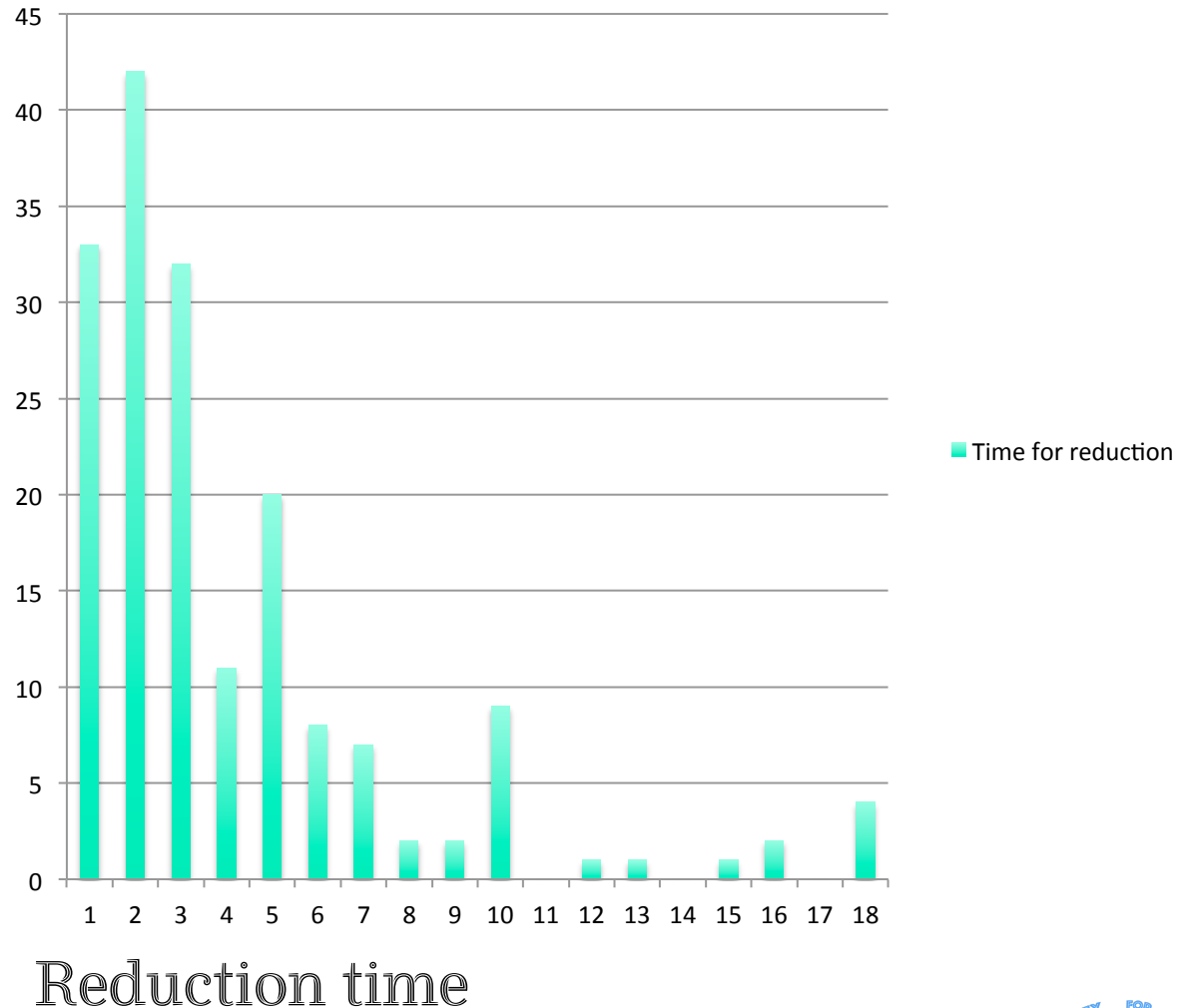


71% of first GHD vs 29% recurrent GHD

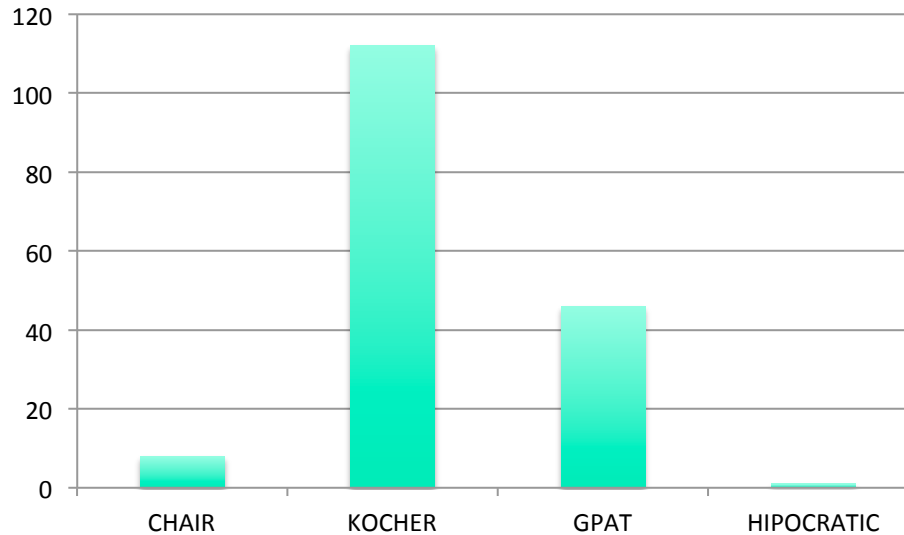
# Shoulder dislocations

85% of the dislocations are reduced in less than 9mn

90% in less than 12mn



# Shoulder dislocations

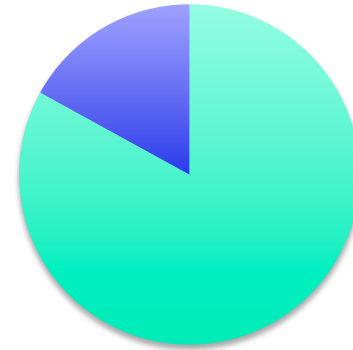


Reduction technique



# Shoulder dislocations

83 % were isolated,  
without fracture  
the most frequent  
**fracture** is avulsion of  
the trochiter (3 glenoid  
fracture)



Only in 5 cases (2, 7%) there were signs of arterial  
or nervous compression



# Shoulder dislocations

Unsuccessful cases:

4 male skier

43, 52, 55, 58 year old

2 first GHD / 2 recurrent GHD



# Shoulder dislocations

Glenohumeral dislocation is a typical (even if not common) snowsport injury

Adult males are mainly concerned

In skiers it's mainly produced in an indirect mechanism while in snowboarders direct hits on the shoulder are at the same level as indirect mechanism

A quick reduction in the ski resort medical center allows an important relief of pain in most of the cases

Associated fractures are uncommon

Vascular and nervous compressions are extremely rare



THANK YOU!





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