

# Ankle Injuries & Practical Exam

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**Yasser Aljabi, MSc FRCS(Tr&Orth)**

**Orthopaedic Foot & Ankle Consultant**

# Focus on

- Common ankle injuries
- Practical ankle exam
- Contemporary treatment
- E.A.S.T. Trial at the Beacon hospital



# History





# Observe



# Bruising Pattern



High Sprain



Low Sprain



Achilles Tendon

# Palpate



Lateral Ligaments



Medial Collateral



Syndesmosis

# GPs Input is Paramount

- Classic teaching that if X Rays are normal, patients are fine

***THAT IS WRONG!***

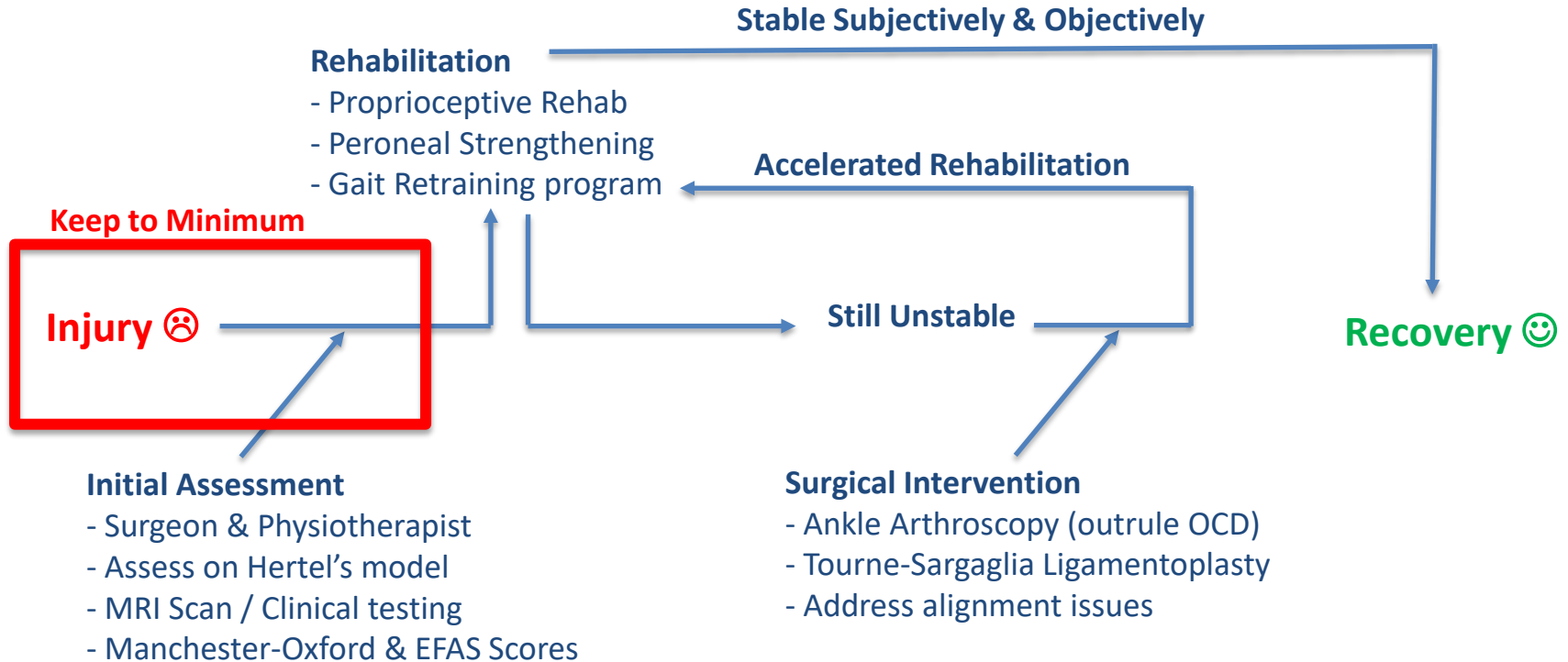
- Soft tissue injuries can be quite debilitating
- If any concerns, send for MRI scan and refer early
  - High energy injury / significant mechanism / concerns on exam
- Will see urgently in clinic



# Treatment Strategy

- Patient centred care
- Every patient is different (age, activity level, sports)
- Aim is to return patients to pre-injury level
- Vast majority of injuries heal with conservative measures
- **But** important to recognise ones who won't early
- Who is surgical candidate?
- And when should we intervene?

# Ankle Instability Pathway



# Treatment Strategy

- Patient centred care
- Every patient is different (age, activity level, sports)
- Aim is to return patients to pre-injury level
- Vast majority of injuries heal with conservative measures
- **But** important to recognise ones who won't quite early
- Who is surgical candidate?
- And when should we intervene?

# Multidisciplinary Approach





# E.A.S.T. Study

## (E)arly (A)nkle (S)tabilisation (T)rial

- Best time to intervene in ankle instability?
  - Literature is unclear and lacks evidence
- Should we be stabilising ankles early?
- Our early evidence suggests yes (Scores, disability, rehabilitation)
- Prospective trial for patients wishing to enrol following ankle sprain
- EUA in theatre under imaging – Varus stress test
  - If stable, gets PRP and physiotherapy
  - If unstable, gets ankle stabilisation

Circle as appropriate: RIGHT / LEFT FOOT <sup>1</sup> <i>During the past 4 weeks this has applied to me:</i>		Please tick ✓ one box for each statement				
		None of the time	Rarely	Some of the time	Most of the time	All of the time
1.	I have pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	I avoid walking long distances because of pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	I change the way I walk due to pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	I walk slowly because of pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	I have to stop and rest my foot because of pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	I avoid some hard or rough surfaces because of pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I avoid standing for a long time because of pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	I catch the bus or use the car instead of walking, because of pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	I feel self-conscious about my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	I feel self-conscious about the shoes I have to wear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	The pain in my foot is more painful in the evening	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	I get shooting pains in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	The pain in my foot prevents me from carrying out my work/everyday activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	I am unable to do all my social or recreational activities because of pain in my foot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>15. During the past 4 weeks</b> how would you describe the pain you <u>usually</u> have in your foot? (please tick one box) None <input type="checkbox"/> Very mild <input type="checkbox"/> Mild <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/>						
<b>16. During the past 4 weeks</b> have you been troubled by <u>pain from your foot</u> in bed at night? (please tick one box) No nights <input type="checkbox"/> Only 1 or 2 nights <input type="checkbox"/> Some nights <input type="checkbox"/> Most nights <input type="checkbox"/> Every night <input type="checkbox"/>						

<sup>1</sup>The foot to be assessed may be indicated here. Alternatively, each question may be customised to the right foot with all questions then repeated and customised to the left foot.

Finally, please check that you have answered every question

Thank you very much

## EUROPEAN FOOT AND ANKLE SOCIETY (EFAS) www.efas.co



### EFAS Score

Below you will find 6 questions relating to your foot and/or ankle problem.

Please answer each question by selecting the answer that best describes your situation in the last week. Each question can be answered on a 5-point scale, with descriptions given for the two endpoints of the scale.

If a question does not apply to you, please indicate this by checking the N/A box on the left.

### QUESTIONS

No.	Question	Answer
1	Do you have pain in your foot and/or ankle when you are at rest?	Always 0    1    2    3    Never 4
N/A		
2	How far can you walk before you get pain in your foot and/or ankle?	Impossible 0    1    2    3    No limitation 4
N/A		
3	How much has your gait (i.e., the way you walk) changed because of your foot and/or ankle problem?	Extreme gait change 0    1    2    3    No 4
N/A		
4	Do you have difficulty walking on uneven surfaces?	Always 0    1    2    3    Never 4
N/A		

Parameter of Interest	Early	Late
Return to Sports	3.2/12	5.3/12
EFAS @ 3/12	9.1	5.2
MOxFQ @ 3/12	14.2	25.1
Physio session	3.8	6.4

# E.A.S.T. Study

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# E.A.S.T. Study

## (E)arly (A)nkle (S)tabilisation (T)rial



Foot and Ankle Surgery  
Volume 26, Issue 7, October 2020, Pages 750-754



### Treatment of lateral ankle sprain with platelet-rich plasma: A randomized clinical study

JuanCarlos Blanco-Rivera, Jorge Elizondo-Rodríguez, Mario Simental-Mendía, Félix Vilchez-Cavazos, Víctor M. Peña-Martínez, Carlos Acosta-Olivo

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<https://doi.org/10.1016/j.fas.2019.09.004>

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#### Highlights

- The use of platelet-rich plasma for the treatment of lateral ankle sprain is effective in relieving pain and favors the clinical evolution in short-term.
- We could observe that the rigid immobilization is helpful to treat the lateral ankle sprain.
- In a 24-week of follow-up, comparable results were observed in patients treated with rigid immobilization or platelet-rich plasma and rigid immobilization.

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### Effectiveness of a single platelet-rich plasma injection to promote recovery in rugby players with ankle syndesmosis injury

David J Samra,<sup>1</sup> Amy D Sman,<sup>2,3</sup> Katherine Rae,<sup>1</sup> James Linklater,<sup>4</sup>  
Kathryn M Refshauge,<sup>2</sup> Claire E Hiller<sup>2</sup>

**To cite:** Samra DJ, Sman AD, Rae K, et al. Effectiveness of a single platelet-rich plasma injection to promote recovery in rugby players with ankle syndesmosis injury. *BMJ Open Sport Exerc Med* 2015;0:000033. doi:10.1136/bmjsem-2015-000033

► Prepublication history for this paper is available online. To view these files please visit the journal online (<http://dx.doi.org/10.1136/bmjsem-2015-000033>).

Accepted 18 August 2015

#### ABSTRACT

**Aims:** To determine whether a single ultrasound-guided platelet-rich plasma (PRP) injection into the anterior inferior tibiofibular ligament (AITFL) reduces the time for rugby athletes to return to function and match play following MRI confirmed ankle syndesmosis injury.

**Methods:** Cohort controlled pilot study. 10 Rugby Union players were recruited during the 2014 season, and consented to receive a single autologous PRP injection into the AITFL within 14 days of MRI confirmed ankle syndesmosis injury. A historical control group included 11 comparable Rugby Union players between 2011 and 2013 who were treated conservatively with the same inclusion criteria and rehabilitation protocol as the intervention group. Participants followed a standardised rehabilitation protocol involving simple milestones for progression. Early functional tests were performed 2 weeks after the removal of the CAM (controlled ankle motion) boot. Time to return to play was recorded. Repeat functional testing occurred within 1 week of return to play.

**Results:** Groups were comparable in anthropometrics, playing position and MRI injury severity. Time to return to play was significantly less in the intervention group

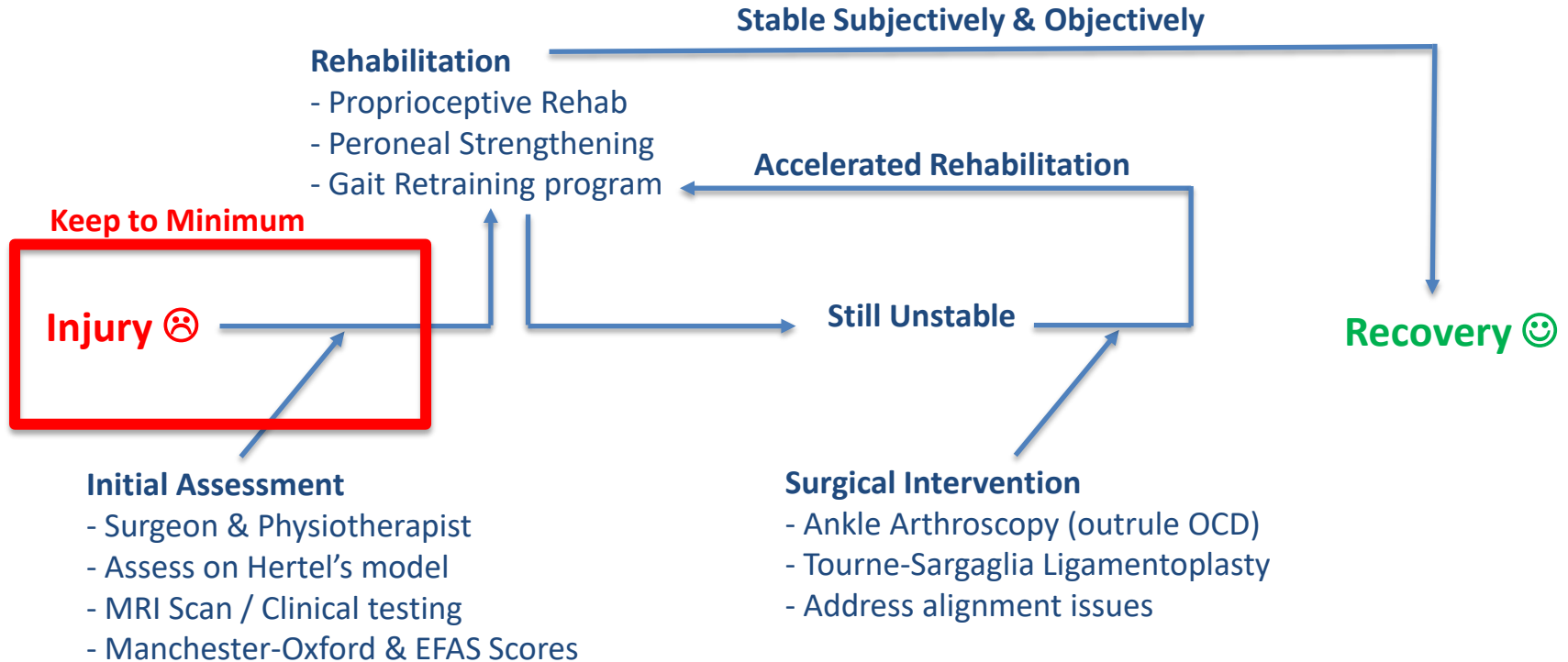
#### What are the new findings?

- This is the first study to report the effectiveness of a single PRP injection in ankle syndesmosis injuries for Rugby Union players, who appear to have a high incidence of this injury.
- PRP injections may accelerate safe return to play for Rugby Union players with non-surgical ankle syndesmosis injuries, when combined with appropriate rehabilitation.
- While a follow-on randomised controlled trial would be feasible and could provide firmer evidence of effectiveness, PRP obtained from simple systems and injected with ultrasound guidance appears to be safe and effective.

the sporting population. Several studies<sup>1-3</sup> have suggested that these injuries have a higher incidence than once thought, and are probably underdiagnosed. Rugby Union seems to have a disproportionately high incidence of ASI, even compared with Rugby League (0.89 vs 0.46 injuries per 1000 h).<sup>4</sup>



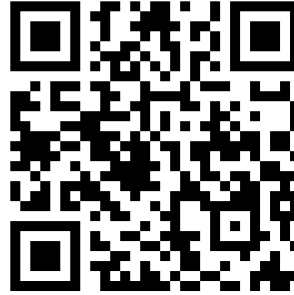
# Ankle Instability Pathway



# Summary

- Recognition of injuries is key
- Early referrals are essential
- Best care for patients

# Questions and Feedback



QR Code



**Yasser.aljabi@beaconhospital.ie**