



Sports Medicine Roadshow 2019

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UPMC | WHITFIELD

CONSERVATIVE MANAGEMENT OF FAI

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Definition of Femoral Acetabular Impingement Syndrome (FAIS)

Griffin et al (2016)⁽¹⁾ presented the Warwick Agreement : “ a motion-related clinical disorder of the hip representing abnormal osseous contact between the proximal femur and acetabulum.”

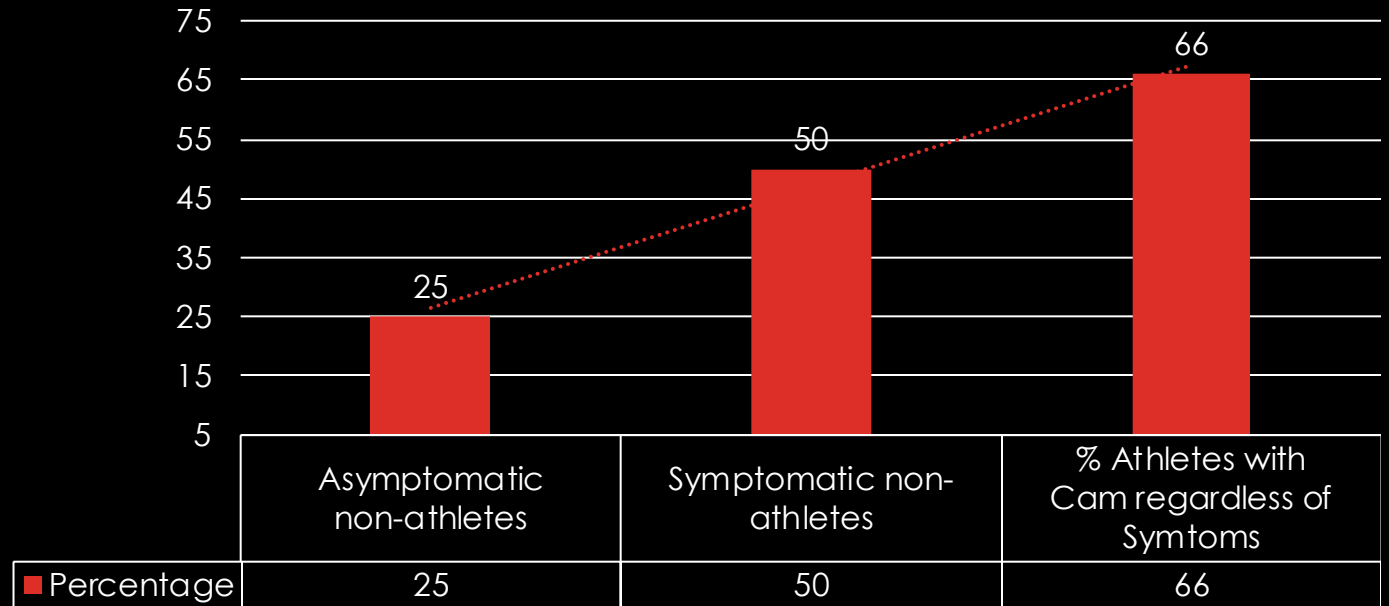
Defined by a triad of symptoms, clinical signs and imaging findings. :



PREVALENCE OF MORPHOLOGY

(2,3)

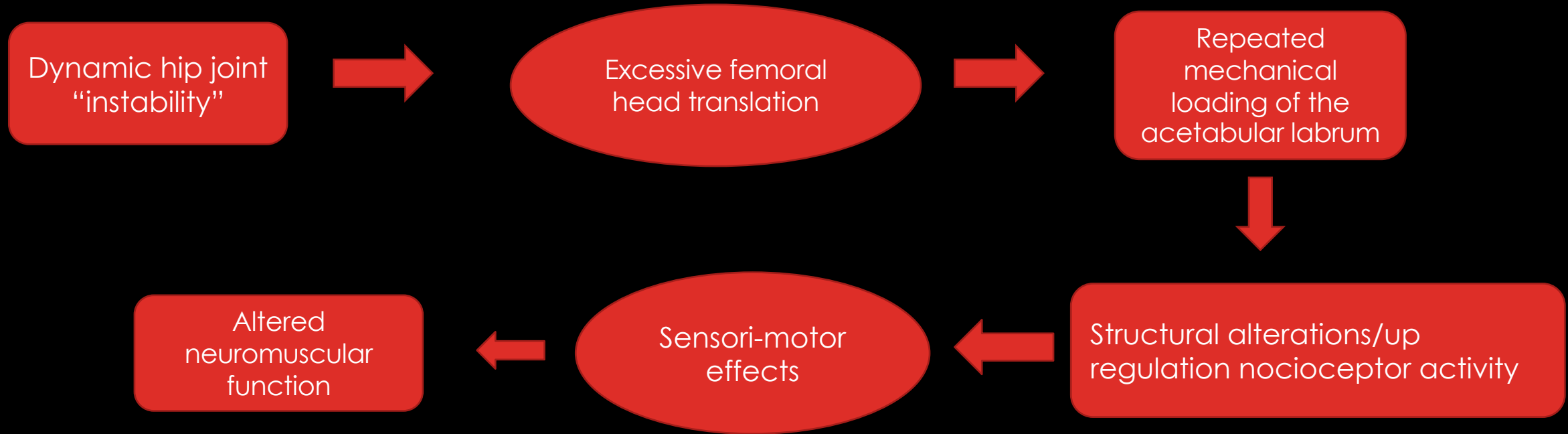
3 types of FAI morphology :
Cam (most common)
Pincer
Mixed



- Develops due to loading patterns during skeletal maturation ⁽⁴⁾
- Can be a risk factor to developing OA: 6-25% of hips with cam morphology will develop future OA within 5-19 years ⁽⁵⁾

FAIS PATHOMECHANISM

6



↓ Patient Factors: ⁽⁷⁾

- Smoking
- Lower activity levels
- Female
- Poorer mental health status

➔ Stronger correlation with hip pain and function than intra-articular findings

FAIS IMPAIRMENTS ⁽⁸⁾

Hip ROM	FAIS vs healthy controls	Dec hip abd/flexion Hip add/ext ER and IR	Limited evidence No diff Conflicting results
Hip muscle function	FAIS vs healthy controls Women FAIS Men FAIS	Dec add/ER Dec HF Dec extension/abd Dec all hip muscles Dec add and flex	Moderate conflicting Limited evidence Limited conflicting
Functional task performance	FAIS vs healthy controls	Squat depth Pelvic ROM Dec SLB Challenging task	No difference No difference Significant evidence Varying evidence
Trunk muscle function ⁽⁹⁾	Post FAIS surgery with chondrolabral pathology vs controls	Bilateral trunk strength deficits	Significant evidence

CONSERVATIVE MANAGEMENT

1. PHYSIO: IMPAIRMENT BASED “ *High quality, high value physiotherapist-led intervention*” (1, 10)
2. EDUCATION :
 - Load management,
 - Awareness of impingement positions,
 - Pathanatomy,
 - Prognosis; reduce threat factor of OA
 - Treatment options
3. EXPECTATIONS ????:
 - Patient’s individual values/goals
 - Efficacy of physiotherapy vs surgery : only moderate QOL measures with both interventions (11)
 - Regardless of treatment, outcomes likely inferior to age-matched healthy controls (12, 13).

MANUAL THERAPY??

- Do they demonstrate within-session pain modulation effects?
- If patient is pain adaptive, incorporate for 2-4 sessions to facilitate early pain modulation while developing strength and load capacity ⁽¹⁴⁾
- Combined with personalised rehab exercise ^(12, 13)

REHAB EXERCISE

Personalised, progressive, physiotherapist-led rehab
Target individual physical impairments

HIP (11)



TRUNK (10)



BALANCE/FUNCTION (11)



EVIDENCE

RCT	Outcome	Limitations
<p>Mansell et al (2018) : N= 80 Military personnel</p> <p>Physio (N=40) vs arthroscopy (N=40)</p> <p>Manual therapy and rehab exercise X 12 sessions/6 weeks</p>	<ul style="list-style-type: none"> - Statistically significant improvements seen in both groups but no difference between groups at 6/12, 1yr, 2yrs on HOS and iHOT-33. - 58.1% did not perceive a clinically meaningful change at 2 years (GROC). - 1/3 still not fit for duty at 2 years. 	<p>High rate of crossover from physiotherapy group to surgery group may have affected power of the study.</p>
<p>Griffin et al (2018) "FASHion" trial : N = 348</p> <p>Physio (N=177) vs surgery (N=171)</p> <p>Manual therapy and "personalised hip therapy" +/- 1xhip joint CSI X6-10 sessions/12-24 weeks</p>	<ul style="list-style-type: none"> - Both groups had statistically significant improvements at 6/12 and 1yr on iHot-33. - Adjusted mean difference between groups = 6.8 points on iHot-33 (surgery superior) (Where MCID : 6-10 points out of 100) 	<p>Participants and treating clinicians were not masked to treatment allocation.</p> <p>No long term follow-up to measure whether intervention effect maintained or further treatment required.</p>
<p>Kemp et al (2018) "PhysioFIRST" : N = 24 (pilot feasibility study)</p> <p>Physio (N=17) vs control (N=7)</p> <p>Manual therapy and FAIS-specific rehab x 8 sessions/12 weeks.</p>	<ul style="list-style-type: none"> - Large effect size for strength gains in all hip muscles and trunk endurance. - Clinically meaningful improvements in pain, function and QOL : adjusted mean difference between groups = 27 on iHot-33 (FAIS-specific superior). 	<p>Small sample size</p>

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