**Appendix 1**

**Patient Presentation**

**Patient:**

23-year-old male professional footballer of British Caribbean descent.

Significant history of intermittent LBP approximately 5 years

**Pain:**

Dull ache centrally over L3 to L5 L > R

Activity dependent: reports “tightening sensation of lumbar extensors”

Severity = Low,

NPRS:

8 /10 @ worst - high intensity running.

0/10 @ best - rest

Nil radicular pain

Nil neurological deficit

**Red Flags:**

No P&N / numbness / loss of sensation

No night pain

No Bladder & Bowel complaints,

NO sudden weight loss.

**Imaging:**

MRI August 2016 – NAD (See Appendix 2: MRI report)

**PMH:**

(See Appendix 3, chronological data injury sheet)

**DH:**

Vitamin D supplementation

**24hr pattern:**

* Morning stiffness & discomfort on waking which eases with movement.
* Onset of pain becomes worse with activity and continues to get worse during the session until activity has ceased.
* Increase in intensity causes increase in pain.
* Gradually improves with rest,
* Sustained postures / positions for periods longer than 30 mins e.g sitting & sleeping aggravate condition

**Appendix 1 (cont.)**

**Body Chart**



Aggravating factors:

* High intensity running
* Gym exercise contracting the lumbar muscles (eg. Bridging, hyperext)
* Sustained static positions

Easing Factors:

* Rest from activity
* Stretching programme

Intermittent Non

Specific Low Back Pain

of Lumbar extensors and

paraspinal muscles

Anterior pelvic tilt

and tight hip flexors

Significant History of

non-contact hamstring

strains

History of medial

malleolous

 stress fracture

**Appendix 2**

**Objective Assessment**

**Observation:**

* Protracted shoulders bilateral.
* Stands in anterior pelvic tilt with increased Lumbar Lordosis.
* Lumbar scoliosis concave left.
* Normal gait

**Neurodynamic Testing**:

SLR – NAD

Slump - NAD

**Muscle Length Test:**

Quadriceps length Prone Knee Bend: R=L

Thomas Test –

Left - NAD

Right – Hip abduction

**Hypermobility:**

Beighton’s Score: 1 (Lsp)

**Hip Assessment:**

ROM – Full range Strength – 5/5 Quadrant - NAD

**Anthropometrics:**



Age – 23 Height – 162cm Weight – 85kg

**Range of Movement (ROM):**

Full active ROM

* Flexion
* Extension (pain end of range)
* Left side flexion (pain ipsilateral)
* Right side flexion (pain contralateral)

**Palpation:**

High tone Erector Spinae & Lumbar paraspinals TOP+ L2 – L5

**Provocation Testing:**

Sacroiliac Joint: Distraction – NAD Thigh Thrust – NAD FABER’s – NAD Compressions - NAD Gaenslan’s – NAD

Pubic Symphysis:

PSST - NAD

**Analysis:**

The player presents with a significant anterior pelvic tilt and hyperlordosis of the lumbar spine, possibly increasing abnormal load through Lsp facet joints, which is aggravated specifically when running. In the absence of a pathoanatomical disruption, the presentation of symptoms correspond with a neurophysiological model of chronic low back pain corresponding with complex biochemical & neuromodulation changes at a peripheral, as well as at spinal cord and cortical level [3].

**Appendix 3**

**Multi-modal Management Plan:**



Education

Cognitive

Behavioural

Techniques

Mindfullness

|  |  |  |  |
| --- | --- | --- | --- |
| Posture Re- |  | Multi-Modal |  |
|  | Management |  |
| Education |  |  |
|  | Plan |  |
|  |  |  |

Acupuncture

Stretching /

Self

Mobilisations

Functional

Core

Manual

Therapy

Running

Mechanic

Drills

**Appendix 4**

**MRI Report**



**Appendix 5**

**Chronological Injury Data**



|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Injury** | **Limb** | **Date** | **Mechanism of injury** | **Rehabilitation** | **Days to RTP** |  |  |
|  |  |  |  |  | 6 |  |  |
| Adductor longus strain | Right | 15/07/14 | Non-contact over stretch for the ball | Posture Re-education |  |  |
|  |  |  |  | S&C gym / pitch rehab |  |  |  |
|  |  |  |  |  | 22 |  |  |
| Hamstring strain | Left | 20/03/15 | Non contact. Sprinting for ball and felt | Compression |  |  |
|  |  |  | hamstring discomfort | Hydrotherapy |  |  |  |
|  |  |  |  | Manual therapy - Lsp, hamstring & |  |  |  |
|  |  |  |  | gluts |  |  |  |
|  |  |  |  | Dry needling to piriformis |  |  |  |
|  |  |  |  | S&C |  |  |  |
|  |  |  |  | Pitch based rehab |  |  |  |
|  |  |  |  |  | 10 |  |  |
| Rectus Femoris Strain | Right | 13/07/15 | Non contact, gradual onset of | Rest / offload period |  |  |
|  |  |  | tightness. Worsening picture over | S&C |  |  |  |
|  |  |  | proceeding 24hrs | Return to Running |  |  |  |
|  |  |  |  |  | 23 |  |  |
| Hamstring Strain | Left | 14/08/15 | Non contact. Sprinting for ball and felt | Compression |  |  |
|  |  |  | hamstring discomfort | Hydrotherapy |  |  |  |
|  |  |  |  | Manual therapy – Lsp, hamstring & |  |  |  |
|  |  |  |  | gluts |  |  |  |
|  |  |  |  | Dry needling to piriformis |  |  |  |
|  |  |  |  | S&C |  |  |  |
|  |  |  |  | Pitch based rehab |  |  |  |
|  |  |  |  |  | 168 (ongoing) |  |  |
| Medial malleolous Stress | Left | 02/04/16 | Gradual onset of symptoms following | NWB in aircast boot |  |  |
| Fracture |  |  | significant increase in training load | Gait Re-Education |  |  |  |
|  |  |  |  | S&C / pitch based running |  |  |  |
|  |  |  |  |  |  |  |  |



**Appendix 6**

**Diagrams of Acupuncture Sites**

**Urinary Bladder Meridian**

**BL23**



**BL24**



**Appendix 6 (cont.)**

**Diagrams of Acupuncture Sites**

**BL25**



**BL56**



**BL62**



**Appendix 6 (cont.)**

**Diagrams of Acupuncture Sites**

**Gall Bladder Meridian**

**GB30**



**Small Intestine Meridian**

**SI3**

