FIBROMYALGIA

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What is fibromyalgia?

- Chronic widespread pain
- Stiffness
- Fatigue
- Disrupted and unrefreshed sleep
- Cognitive difficulties
- Impairment of Activities of daily living
How common is Fibromyalgia?

- Prevalence of chronic widespread pain 10%
- Prevalence in the UK between 2-5%
- 1 in 25 people may be affected
- Common in women > men
- Symptoms develop between age 20-50 years
- Highest prevalence over age 60+
- Probably being underdiagnosed
Causes of fibromyalgia

Familial
- 8-fold higher in first degree relatives of FM patients
- Twin studies familial basis for pain

Gender
- Women x7 times more than men

Lifetime history
- Chronic pain affecting different areas over time

Environmental factors
- Injury, trauma, infection, work, family, life events
Causes of Fibromyalgia

• Disorder of pain regulation
• Dysfunctional pain processing mechanisms in the central nervous system
• Central amplification
• Increased “volume control” due to imbalance of neurotransmitters in CSF
• Functional MRI abnormal signalling in areas processing pain and emotion – amygdala, thalamus and insula
Causes of Fibromyalgia

- Sleep dysfunction is an integral problem
- Non-restorative sleep
- Waking feeling exhausted unrefreshed
- Sleep studies show reduced slow-wave sleep and α-intrusion during non-REM sleep
- Sleep deprivation in healthy individuals can cause symptoms of fibromyalgia
Difficulties with diagnosing Fibromyalgia

- Clinical diagnosis
- Reliant on patient subjective symptoms
- Pain in affected areas – no tissue inflammation
- Lack of reproducible clinical signs
- No universal diagnostic gold standard
- No specific blood tests
- FM can co-exist with other rheumatic diseases
American College of Rheumatology Classification Criteria for Fibromyalgia 1990

- Chronic widespread pain for greater than 3 months
- Minimum 11/18 tender points
- Digital palpation applied with force of 4Kg
- ACR criteria are both sensitive (88.4%) and specific (81.1%)
Limitations of ACR 1990 classification

- Tender point test hard to standardise
- Healthy people have tender points
- Under diagnosis of FM especially in men
- Gives impression FM is a peripheral musculoskeletal problem
- Does not take into account the sleep disturbance, fatigue and cognitive problems
ACR Diagnostic criteria for fibromyalgia

- Evolved over time
- Tender point examination not required
- Recognises the non pain symptoms of FM
- 2010 designed for primary care
- 2011 modified for self-reporting of FM
- 2016 combination of both
Widespread Pain Index
(1 point per check box; score range: 0-19 points)

1. Please indicate if you have had pain or tenderness during the past 7 days in the areas shown below.
Check the boxes in the diagram for each area in which you have had pain or tenderness.

Symptom Severity
(score range: 0-12 points)

2. For each symptom listed below, use the following scale to indicate the severity of the symptom during the past 7 days.
• No problem
• Slight or mild problem: generally mild or intermittent
• Moderate problem: considerable problems; often present and/or at a moderate level
• Severe problem: continuous, life-disturbing problems

<table>
<thead>
<tr>
<th>Points</th>
<th>No problem</th>
<th>Slight or mild problem</th>
<th>Moderate problem</th>
<th>Severe problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Fatigue</td>
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<tr>
<td>B. Trouble thinking or remembering</td>
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<tr>
<td>C. Waking up tired (unrefreshed)</td>
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</table>

3. During the past 6 months have you had any of the following symptoms?

<table>
<thead>
<tr>
<th>Points</th>
<th>0</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>A. Pain or cramps in lower abdomen</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>B. Depression</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>C. Headache</td>
<td>No</td>
<td>Yes</td>
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Additional criteria (no score)

4. Have the symptoms in questions 2 and 3 and widespread pain been present at a similar level for at least 3 months?

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
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5. Do you have a disorder that would otherwise explain the pain?

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<tr>
<th>No</th>
<th>Yes</th>
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</table>
A patient satisfies modified 2016 fibromyalgia criteria if the following 3 conditions are met:

<table>
<thead>
<tr>
<th>Symptoms present for at least 3 months</th>
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<table>
<thead>
<tr>
<th>Widespread pain index WPI: 0-19</th>
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<tbody>
<tr>
<td>• pain score in at least 4 of the five regions</td>
</tr>
<tr>
<td>• to ensure regional pain syndromes not captured by criteria</td>
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</table>

<table>
<thead>
<tr>
<th>Symptom severity scale SSS: 0-12</th>
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<tbody>
<tr>
<td>• fatigue, cognitive problems, poor sleep</td>
</tr>
<tr>
<td>• Headache, abdominal cramps, depression</td>
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</table>

WPI ≥7 and SSS ≥ 5  **OR**  WPI 4-6 and SSS ≥ 9

Fibromyalgia is valid irrespective of other diagnosis and does not exclude the presence of other clinically important illnesses
EVALUATING A PATIENT WITH WIDESPREAD PAIN
Differential diagnosis:

- Inflammatory rheumatic diseases
- Hypermobility syndrome
- Generalised osteoarthritis
- Neurological conditions
- Spinal stenosis/myelopathy
- Endocrine/gastroenterology/infection
- Malignancy (myeloma)
- Mental health disorders
• Patients with new onset inflammatory arthritis may present with fibromyalgia like symptoms

• Patients with inflammatory arthritis may have co-existing fibromyalgia
• History
• Examination
• Are there red flags?
## Features of fibromyalgia pain

| LOCATION       | Chronic widespread pain  
|                | Affecting both sides of the body  
|                | Sites above and below the diaphragm  
|                | Pain in the axial skeleton  
| DURATION       | Pain for at least 3 months  
| QUALITY OF PAIN| Allodynia: pain experienced from non painful stimuli  
|                | Hyperalgesia: amplified response to painful stimuli  
|                | Other characteristics: aching all over, flu-like, burning  
| FLARES         | Pain worsens with over activity, stress and life events  

Associated conditions:

- Headaches
- Dizziness and vertigo
- Irritable bowel syndrome
- Interstitial cystitis
- Frequent micturition/dysuria
- Chest pain
- Numbness or tingling hands and feet
- TMJ dysfunction
Case 1

GP referral:

Age 31
Back pain, down legs but also arms, tingling episodes all over. Non specific

? Fibromyalgia
Chronic low back pain 3 years
MRI disc prolapse – epidural
Now complaining of flare of back pain
Under orthopedic team awaiting result 2\textsuperscript{nd} MRI
Shooting pains into both groin area and knees
Tingling in legs with intermittent numbness
Tingling in gums, tongue, nose and face
Pins and needles in the arms
No joint swelling
Past history of bariatric surgery (not working)
Current weight 129Kg
Medication:
Amitryptiline 100mg (not effective)
Side effects gabapentin
Naproxen 500mg bd
Topiramate for headaches
Mebeverine for abdominal spasms
No family history of inflammatory arthritis/ psoriasis
On examination:

Pain in the dorsal, lumbar spine and hips
Trigger points neck, scapula, lower back, gluteal area and greater trochanters
Altered sensation/tingling arms and legs
Reflexes normal
Peripheral joint examination normal
Previous management:

Pain management programme
Cognitive behavioural therapy
Awaiting appointment at another pain clinic

Impression: Fibromyalgia
Next steps ?
Case 2

GP referral:

Age 24
Generalised aches and pain in the joints and bones. She suffers from psoriasis
Screening tests done
Would appreciate further assessment and management
Psoriasis since age 14
No other health issues

2 years of increasing pain in her lower back and buttock area 8/10 severity

Early morning stiffness of 30 minutes

Pain in hips and knees

Pain and stiffness small joints of the hands

No GI symptoms or history of uveitis

No family history of spondyloarthritis
On examination:

Full ROM neck, dorsal and lumbar spine
Tender in her wrists, MCP, PIP and DIPJ
PIPJ puffy
Tender trigger points – shoulders, lateral epicondyles, medial knees and greater trochanters.
Tender trigger points lower lumbar spine/gluteal area
Plan:

MRI spine/sacroiliac joints
Bloods
HLA B27 test
Ultrasound hands/wrists

Imp ? Spondyloarthropathy
<table>
<thead>
<tr>
<th>RED FLAGS</th>
<th>Rheumatoid arthritis/Connective tissue disorders</th>
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<tr>
<td>Pain in small joints of hands or feet</td>
<td>Pain in the squeeze test</td>
</tr>
<tr>
<td>Swollen joints</td>
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<tr>
<td>Morning stiffness</td>
<td>Over 30 mins</td>
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<tr>
<td>Abnormal neurological signs</td>
<td>Proximal weakness</td>
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<tr>
<td>Systemic symptoms</td>
<td>Fever, loss of appetite, weight loss</td>
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<tr>
<td>Lymphadenopathy</td>
<td></td>
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<tr>
<td>New onset Raynaud’s phenomenon</td>
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<tr>
<td>Connective tissue disorder symptoms</td>
<td>Rashes, sicca, photosensitivity</td>
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<tr>
<td>Unexplained rise ESR or CRP</td>
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</table>
**RED FLAGS - Spondyloarthropathy**

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<tr>
<td>Spinal pain age less than 45</td>
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<tr>
<td>Early morning stiffness much longer than 30 mins relieved by exercise</td>
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<tr>
<td>Enthesitis especially at multiple sites</td>
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<tr>
<td>Psoriasis</td>
</tr>
<tr>
<td>Uveitis</td>
</tr>
<tr>
<td>Symptoms suggestive of inflammatory bowel disease</td>
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<tr>
<td>Family history of spondyloarthropathy</td>
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Diagnosis and management in primary care

History
Examination
Are there red flags?  NO

Minimum blood tests
  • FBC, ESR, CRP, Renal and liver function
  • Bone profile/Vitamin D, CK, HbA1c, TFTs, urine dipstick

Additional investigations
  • Only if clinically indicated.
  • Do not test ANA unless CTD symptoms
Referral to rheumatology

- Red flags
- Suspected inflammatory arthritis or CTD
- Uncertainty around diagnosis
Management

- Patient education
- Promote self management
- Support physical activity
  - Graded physical therapy 20-30 min 2-3 x week
  - Tai Chi
- Address sleep disturbance
- Identify psychosocial co-morbidities
- Medication
Management recommendations as flow chart.

1. History and physical examination
2. Diagnosis of fibromyalgia
3. Patient education and information sheet
4. Physical therapy with individualised graded physical exercise (can be combined with other recommended non-pharmacological therapies such as hydrotherapy, acupuncture)
5. Reassessment of patient to tailor individualised treatment
6. Additional individualised treatment:
   - Pain-related depression, anxiety, catastrophizing, overly passive or active coping
   - Severe pain / sleep disturbance
   - Severe disability / sick-leave

   - Psychological therapies
     - Mainly cognitive behavioural therapy
     - For more severe depression / anxiety consider psycho-pharmacological treatment
   - Pharmacotherapy
     - Severe pain
       - Duloxetine
       - Pregabalin
       - Tramadol (or in combination with paracetamol)
     - Severe sleep problems
       - Low dose amitriptyline
       - Cyclobenzaprine or Pregabalin at night
   - Multimodal rehabilitation programs

THANK YOU