

Case

- 38 y.o.
- Episodic LBP for 7 yrs.

Pain, onset, character

- LB / pelvic region
- 2-3/10 best
- 6-7/10 worst
- Ache & sharp w/ bending

AF

- Pain during 3rd trimester & postpartum w/ all 4 pregnancies
- Housework & picking up children

RF

- Rest & periodic chiro
- SMT (spinal manipulation technique) & STW (soft tissue work) techniques

Extra

- Asthma since childhood - concerned its getting worse (worried there's dampness in house)
- Smokes 20/day for 20 years
- Takes OCP (oral contraceptive pill)

Psychosocial factors

- Can't read / write well & blames this on getting the MMR vaccine
- Children aren't vaccinated
- Husband passed away last year

System review

- Non-productive cough in the mornings

Physical Examination Findings

Observations

- Appears pale + underweight
- Nicotine stains on hands + fingers
- Slight lower crossed posture
- Levoconvex Tx scoliosis

ROM

- Levoscoliosis (apex T6)
- **AROM Lx:** flexion & extension - slight limitation at end range w/ discomfort around LS junction
- Small rib hump seen on forward flexion

Palpations

- QL trigger points
- Glute med, max TTP

Clinical tests

Kemps:

- **Purpose:** assess Lx spine facet joint pain
- **Findings:** L reproduces POC at LS junction; R -ve

SLR:

- **Purpose:** identifies impairment in disc anatomy or nerve root irritation
- **Findings:** 70° bilat. w/ tight hamstrings

Slump's:

- **Purpose:** detect altered neurodynamics or neural tissue sensitivity
- **Findings:** Negative (-ve)

SI springing:

- **Purpose:** diagnose joint dysfunction
- **Findings:** mild LBP R>L

Faber's:

- **Purpose:** diagnose hip pathology by attempting reproducing pain
- **Findings:** mild LBP R>L; no restrictions of hip range

Thigh thrust:

- **Purpose:** provocation of SIJ
- **Findings:** mild LBP R>L

Gaenslens:

- **Purpose:** diagnose SIJ lesion, pubic symph. instability, L4 nerve root lesion
- **Findings:** mild LBP R>L

Sacral base compression:

- **Purpose:** diagnose hip pathology
- **Findings:** mild LBP

SIJ compression & distraction:

- **Purpose:** SIJ sprain or dysfunction
- **Findings:** no pain

McGills test:

- assess radiographic Lx instability
- **Findings:** LBP on part 1, decreased pain on part 2 (positive = Lx-pelvic instability)

Active SLR:

- **Purpose:** assess Lx-Sx nerve root irritation
- **Findings:** LBP on part 1, decreased pain on part 2

Discussion**Working Dx**

- Chronic LBP w/ associated Lx & pelvic functional instability

Psychosocial

- Pt's circumstances changed dramatically the past year after husband's death
- Now reliant on social support
- Her & her 3 children had to move due to lack of social housing
- Difficulty reading & writing
- On medication for depression & anxiety

Communication

- Don't talk to pt about tardiness / psychology

Other

- Chronic pain usually psychosocial
- Scoliosis not related to complaint but may be to some of the findings



Learning outcomes

Dx of LBP:

- **Muscle strain:** pain, stiffness, & soreness
- **Herniated disc:** pain, numbness, & tingling in LB, buttocks, & legs
- **OA:** pain, stiffness, & loss of mobility
- **Spinal stenosis:** pain, numbness, & weakness in LB, buttocks, & legs
- **Spondylolisthesis:** LB pain, numbness, & stiffness, as well as numbness & tingling the legs
- **Fibromyalgia:** widespread pain, including the LB
- **Inflammatory arthritis:** inflammation & pain

Scoliosis:

☐ **Definition:**

- Spine curvature - mild or severe
- Can affect all ages
- Most commonly diagnosed in children & adolescents

☐ **Types:**

- **Idiopathic:** most common & cause is unknown
- **Congenital:** present at birth & caused by abnormal spinal development
- **Neuromuscular:** caused by neuromuscular disorder (e.g. cerebral palsy or muscular dystrophy)
- **Degenerative:** caused by degeneration of the spinal discs & joints in the spine (usually seen in adult >65y.)

☐ **Symptoms:**

- Depend on severity
- Mild: asymptomatic
- Severe: back pain, fatigue, uneven shoulders & hips, & difficulty standing or sitting up straight

☐ **Treatment:**

- Depends on severity & age
- Mild: may not require treatment, or manual therapy
- Severe: bracing or surgery

Management of this pt:

- **Pain management:** NSAIDs, cognitive behavioural therapy (CBT), acupuncture, manual therapy, electrotherapies
- ☐ **Physical therapy:** improve strength, flexibility, stability, core strength, posture, & overall mobility
- **Manual therapy:** spinal manipulation or mobilisation (relieve pain & improve mobility), soft tissue therapy to relieve muscle tension & improve ROM
- **Psychosocial interventions:** cognitive-behavioural therapy (CBT) to reduce anxiety & depression related to pain
- **Bracing:** in severe cases provides support to the affected area
- (Surgery only in severe cases)

Impact of yellow flags present:

- Prolonged recovery
- Increased disability: psychosocial factors can affect their ability to cope w/ pain & perform ADLs
- Increased healthcare utilisation
- Work-related issues: more economic burdens than this pt already has
- Chronic pain: yellow flags are more likely to develop chronic pain (psychosocial factors can contribute to the development of long-term pain conditions)

Consider other health concerns present in this pt:

- Non-productive cough: likely due to smoking
- Smoking 20 (30?) cigarettes / day for 20 years
- Unvaccinated
- Underweight & pale: iron-deficiency, malnutrition, chronic stress, or depression

Relationship between depression & LBP:

- **Shared biological mechanisms:** common biological pathways (e.g. abnormalities in the CNS), that contribute to the development & maintenance of both conditions
 - **Psychosocial factors:** chronic pain can lead to -ve psychosocial consequences (e.g. social isolation, reduced physical activity, & poor quality of life), which can contribute to depression
 - **Stress:** chronic stress is linked to development & exacerbation of both depression & chronic pain
 - **Behavioural factors:** pts w/ chronic pain may adopt maladaptive coping strategies (avoidance), which can lead to a -ve spiral of pain, disability & depression
- ☐ LBP & depression interact in complex ways & treatment has combination of pharmacological & psychosocial interventions (CBT)

Changes needed to make w/ clinical procedures & consent to support this pt:

- Holistic approach
- Pt-centred care
- Informed consent
- Multidisciplinary team
- Screening for depression

Other tests that should be done:

- **Respiratory exam:** non-reproductive cough, likely due to smoking
- **Wardell sign:** how much of the pain is psych. related



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