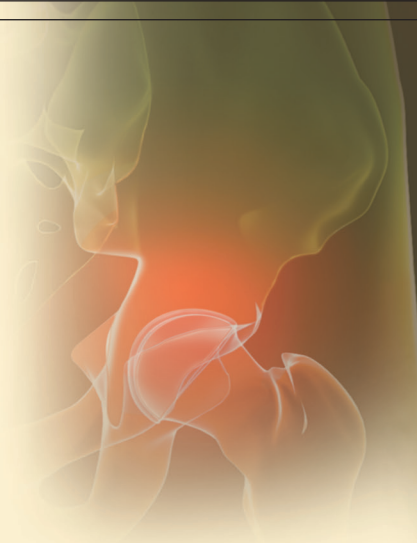


# Rheuma Facts

A quarterly Magazine

2<sup>nd</sup> Issue, April 2013



## Mechanical back pain

Dr. Ahmed Iqbal Mirza  
Dr. Kamran Hameed

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## I feel saddened when a patient walks into my clinic with hands like these

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## Current News

**17<sup>th</sup> International Conference of Pakistan Society for Rheumatology** will be held on April 26-28, 2013 at Marriott Hotel, Karachi. SAMI Pharmaceuticals is proud to be Platinum sponsor of this distinguished conference. For detailed brochure & agenda of the conference see inside the magazine

### NEUROMUSCULAR DISEASE

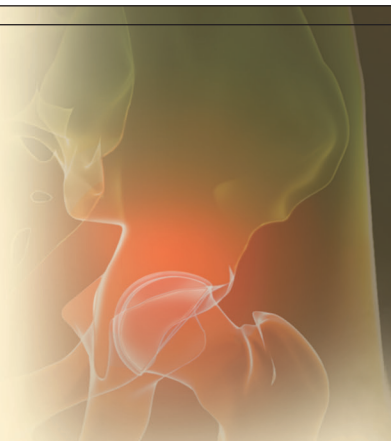
#### Statins and Myalgias

Despite common clinical experience, higher rates of myalgia with statins, compared to placebo, have not typically been found in randomized trials designed to evaluate treatment for cardiovascular prevention. However, a six-month randomized trial in 420 healthy adults designed specifically to examine the effects of statin therapy on skeletal muscle function has found a higher incidence of myalgia in patients treated with atorvastatin 80 mg daily than with placebo (9.3 versus 4.6 percent). Although there have been concerns about the effects of statin therapy on exercise tolerance, no statistically-significant differences were seen in muscle strength, muscle endurance, or aerobic performance

Parker BA, Capizzi JA, Grimaldi AS, et al. Effect of statins on skeletal muscle function. Circulation 2013; 127:96.

# Rheuma Facts

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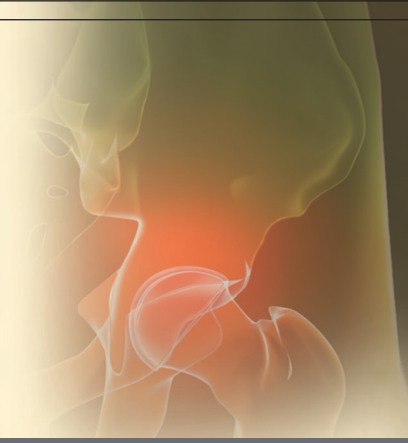
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# Mechanical back pain

Summarized by:

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Aga Khan University Hospital, Karachi

Prof. Dr. Kamran Hameed Consultant Physician and Rheumatologist  
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## Background

Mechanical low back pain is one of the most common patient complaints expressed to emergency physicians. Approximately two thirds of adults are affected by mechanical low back pain at some point in their lives, making it the second most common complaint in ambulatory medicine and the third most expensive disorder in terms of health care money spent surpassed only by cancer and heart disease

Low back pain reportedly occurs at least once in 85% of adults younger than 50 years. It is estimated that 15-20% of people have at least one episode of back pain per year. Of these patients, only 20% can be given a precise pathoanatomic diagnosis. Low back pain affects men and women equally. The onset most frequently occurs in people aged 30-50 years. Low back pain is the most common and most expensive cause of work-related disability. Smokers appear to have an increased incidence of back pain compared with nonsmokers. Furthermore, the incidence of current smoking and the association with low back pain is higher in adolescents than in adults

## Pathophysiology

Many causes of mechanical low back pain exist. The most common causes are age-related degenerative disc and facet processes and muscle- or ligament-related injuries. Discussion in this article is limited to musculoskeletal causes

These can be divided into:

1. Nerve root syndromes
2. Musculoskeletal pain syndromes
3. Skeletal causes

## Nerve root syndromes

Classic nerve root syndrome is characterized by radicular pain arising from nerve root impingement due to herniated discs. A similar syndrome can also be produced by inflammation and irritation, which may explain why patients whose presentation is consistent with this diagnosis respond to conservative therapies

Impingement pain tends to be sharp, well localized, and can be associated with paresthesia, whereas irritation pain tends to be dull, poorly localized, and without paresthesia. Impingement is associated with a positive straight leg raising sign (i.e., shooting pain down contra lateral leg with leg raising), while irritation is not. Neurologic deficits and pain radiation below the knee are rarely seen in irritation alone and are most commonly found with impingement

The cause of impingement syndrome is most commonly herniated discs, but it may also be caused by spinal stenosis, spinal degeneration, or cauda equina syndrome

Herniated discs are produced as spinal discs degenerate. After growing thinner, the nucleus pulposus herniates out of the central cavity against a nerve root. Intervertebral discs begin to degenerate by the third decade of life and herniated discs are found on autopsy in one third of adults older than 20 years. Only 3% of these, however, are symptomatic. The most common locations for herniation are L4, L5, and S1

Spinal stenosis occurs when disc spaces decrease as intervertebral discs lose moisture and volume with age. Even minor trauma under these circumstances can cause inflammation or nerve root impingement, which can produce classic sciatica pain without disc rupture. The pain can often be bilateral

Spinal degeneration is caused by alterations in the hygroscopic quality of the nucleus pulposus. This process progresses to annular degeneration. Coupled with progressive posterior facet disease, this process leads to spinal canal or foraminal encroachment. These retrogressive and proliferative changes in the disc anteriorly and the joints posteriorly produce clinical symptoms and radiographic findings termed 3-joint complex degeneration. Spinal degeneration has 3 distinct stages, as follows:

- Dysfunction with complaints of pain only
- Instability with advanced degeneration, pseudo spondylolisthesis, and neurologic abnormalities
- Stabilization with morning stiffness and with prolonged standing or walking, producing radicular pain

Cauda equina syndrome is produced by massive midline extrusion of nuclear material or tumor into the spinal canal, which compresses the caudal sac. The classic presentation is bilateral sciatica, with lower extremity bowel or bladder dysfunction present in 90% of patients. Urinary retention is initially observed and followed by overflow incontinence. Perineal or perianal anesthesia is present in 60-80% of patients

## Musculoskeletal pain syndromes

Musculoskeletal pain syndromes that produce low back pain include myofascial pain syndromes and fibromyalgia

Myofascial pain is characterized by pain and tenderness over localized areas (trigger points), loss of range of motion in the involved muscle groups, and pain radiating in a characteristic distribution but restricted to a peripheral nerve. Relief of pain is often reported when the involved muscle group is stretched


Fibromyalgia results in pain and tenderness on palpation of 11 of 18 trigger points, one of which is the low back area, as classified by the American College of Rheumatology. Generalized stiffness, fatigue, and muscle ache are reported

## Other skeletal causes

Other skeletal causes of low back pain include osteomyelitis, sacroiliitis, and malignancy

Osteomyelitis results from infectious processes involving the bones of the spine, while sacroiliitis results from inflammatory changes in the sacroiliac joints. This pain presents over the sacroiliac joints and radiates to the anterior and posterior thighs. This pain is usually worse at night and is exacerbated by prolonged sitting or standing

Malignant tumors of the spine can be primary or metastatic. Most primary spinal tumors are found in patients younger than 30 years and usually involve the posterior vertebral elements. Metastatic tumors are



are found mostly in patients older than 50 years and tend to occur in the anterior aspects of the vertebral body

### Mortality/Morbidity

- Most etiologies of mechanical low back pain are not life threatening; however, significant morbidity is associated with chronic low back pain syndromes
- A significant number of patients are unable to return to their normal daily routines or function in a productive work environment secondary to low back pain
- Most cases of back pain treated in the emergency department are not true emergencies, with the exception of cauda equina syndrome. Patients who have cauda equina syndrome must undergo surgical decompression as soon as possible or face permanent neurologic damage

### History

A thorough history and physical examination is paramount to arrive at a diagnosis, and initially imaging is often unnecessary

- Patients most often complain of pain in the lumbosacral area.
- Determine whether pain is exacerbated by movement or by prolonged sitting or standing
- Determine the duration of pain
- Determine if pain is relieved by lying down
- Establish if pain was sudden in onset or gradual over days or months
- Determine if pain is worse in the morning or at night
- Find out if the patient can identify a precipitating event such as lifting or moving furniture
- Explore the presence of systemic symptoms such as fever, weight loss, dysuria, cough, and bowel or bladder problems
- Inquire about current medications that may produce symptomatology
- Chronic steroids may predispose to infection or compression fractures
- Anticoagulants may result in a bleed or hematoma
- Any history of new-onset bowel or bladder dysfunction (eg, urinary hesitancy, overflow incontinence) with back pain is suggestive of cauda equina syndrome. This is particularly true if other, new neurologic deficits are also present

### Physical Examination

- Physical examination of a patient with back pain should include range of motion and a thorough neurologic examination, including assessment of peripheral motor function, sensation, and deep tendon reflexes
- Perform straight leg testing with the patient in a supine position. Record response to raising each leg. An approximation of the test may also be performed with the patient sitting and each leg straightened at the knee. An elevation of the leg to less than 60° is abnormal. The

straight leg test result is positive only if the pain radiates to below the knee and not merely in the back or the hamstrings. This is the single best test for determining radiculopathy due to disc herniation with a high sensitivity and moderate specificity

- Perform an abdominal examination to exclude intra-abdominal pathology
- Perform a rectal examination on men older than 50 years to assess prostate size and exclude prostatitis. Also perform a rectal examination on any patient who may have cauda equina syndrome to assess rectal tone and perineal sensation. If cauda equina syndrome is suspected, urinary catheterization for a post void residual or bedside ultrasonography of the bladder may be helpful to assess for urinary retention
- Perform a rectal examination, if necessary, in younger males who are febrile and have urinary complaints
- Perform a pelvic examination, if necessary, in females complaining of menstrual abnormalities or vaginal discharge
- Patients with true herniated discs may not present with any findings other than a positive straight leg raising test. Classic presentation includes numbness in a dermatomal distribution corresponding to the level of disc involved, with findings of motor weakness and reflex loss as described below. Herniated discs have different presentations depending on the location as follows:
  - **At L4:** Pain along the front of the leg; weak extension of the leg at the knee; sensory loss about the knee; loss of knee-jerk reflex
  - **At L5:** Pain along the side of the leg; weak dorsiflexion of the foot; sensory loss in the web of the big toe; no reflexes lost
  - **At S1:** Pain along the back of the leg; weak plantar flexion of the foot; sensory loss along the back of the calf and the lateral aspect of the foot; loss of ankle jerk
  - **L5 and S1:** These nerve roots are involved in approximately 95% of all disc herniations
- Spinal stenosis may be present when evidence of degenerative joint disease is present on radiographic studies
- Patients with this disease process often complain of progressive pain down the lateral aspect of the leg during ambulation (pseudoclaudication). This pain results from neurologic compression rather than actual arterial insufficiency, which produces true claudication. In cases of spinal stenosis, the straight leg test result is often negative
- The stoop test helps distinguish true claudication from pseudoclaudication. Patients with true claudication sit down to rest when pain occurs, while patients with pseudoclaudication attempt to keep walking by stooping or flexing the spine to relieve the stretch on the sciatic nerve
- Sacroiliitis usually presents with pain over the involved joints and no peripheral neurologic findings
- Osteomyelitis may be subacute or acute
- Clinical findings are nonspecific, and the patient may be afebrile on presentation
- Classic presentation includes pain on palpation of the vertebral body, elevated sedimentation rate, and complaints of pain out of proportion to physical findings

- Patients particularly at risk for development of osteomyelitis include patients who have undergone recent back surgery, intravenous (IV) drug users, patients with immunosuppression, and those with a history of chronic pelvic inflammatory disease (PID)

### Causes

Certain clinical clues can help differentiate between causes. Generally, impingement syndromes produce positive straight leg raising tests, whereas pure irritation does not. To assess for a functional disorder as the cause of low back pain, consider the following:

1. Mechanical low back pain is a common complaint in patients with functional disorders. In addition, a functional overlay or component of secondary gain may be present in some patients with true organic pathology. The degree of psychosocial issues affecting the patient's condition may be assessed by the following:
  - Patient may receive compensation for injury
  - Patient has pending litigation
  - Patient dislikes job
  - Patient has symptoms of depression
  - Patient caused the accident resulting in back pain
2. Physical clues that help identify patients with significant functional overlay or component of secondary gain include the following:
  - Findings of nonanatomic motor or sensory loss
  - Nonspecific tenderness or generalized tenderness over the entire back
  - Overly dramatic behavior and loss of positive straight leg raising test when patient is distracted
3. A particularly useful test is to have patients hold their wrists next to their hips and turn their body from side to side. This test gives the illusion that you are testing spinal rotation, but no actual stress is placed on any muscles or ligaments. Any complaint of pain during this maneuver is strongly suggestive of a functional overlay or component of secondary gain in the presentation

### Differential Diagnoses

- Aneurysm, Abdominal
- Appendicitis, Acute
- Ectopic Pregnancy
- Endometriosis
- Neoplasms, Spinal Cord
- Ovarian Cysts
- Pelvic Inflammatory Disease
- Perirectal Abscess
- Prostatitis
- Renal Calculi
- Urinary Tract Infection, Female
- Urinary Tract Infection, Male

### Laboratory Studies

- Consider performing urinalysis if the problem is not clearly musculoskeletal or an exacerbation of chronic back pain
- Perform a complete blood count (CBC) and erythrocyte sedimentation rate (ESR) if the patient is febrile or if an epidural or spinal abscess, or osteomyelitis is suspected. While ESR has moderate specificity, the sensitivity is relatively high in cases of abscess, and it can be used as a screening test
- Other laboratory studies are rarely needed unless a disorder other than back pain is strongly suspected

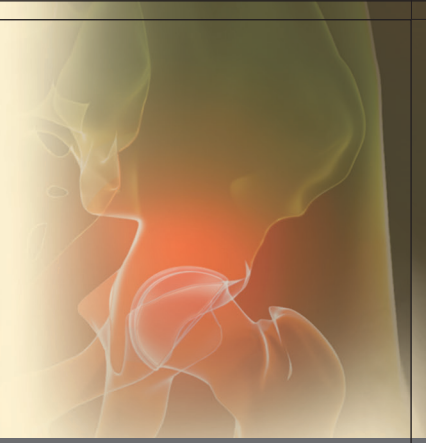
### Imaging Studies

- Radiography
  - Lumbosacral spine series are expensive and expose the reproductive organs to significant radiation. Annually, 7-8 million such tests are obtained, but most have little value in directing therapy, particularly among adults younger than 50 years
  - Osteophytes are the most frequently seen abnormality of plain films followed by intervertebral disc space narrowing. Both increase with age. Disc space narrowing appears to be more frequent in women. Disc space narrowing at 2 or more levels is strongly associated with back pain pathology
  - Unless a history of traumatic injury or systemic illness is present, such films should be obtained only for suspicion of malignancy or infection. Malignant involvement of vertebral bodies can be evident on plain film when as little as 30% of the vertebral body has been replaced
  - Other indications that suggest the need for radiographic imaging include chronic steroid use and acute onset of pain in patients older than 50 years or in the pediatric age group
  - The physician may also consider obtaining radiographs in patients whose cases involve (or potentially involve) litigation or for patients seeking compensation
  - CT and MRI are generally considered the studies of choice for more precise imaging of the vertebrae, paraspinal soft tissues, discs, or spinal cord. CT images cortical bone with higher resolution and can delineate some fractures better than MRI

MRI is generally the preferred imaging modality for detecting disc, cord, or soft tissue abnormalities

### Magnetic resonance image of the lumbar spine

- Ultrasonography may be useful if the differential diagnosis includes appendicitis, a pathologic pelvic process, or abdominal aneurysm
- True emergencies that necessitate imaging include the following:
  - Patients with a history of malignancy and new evidence of nerve entrapment



- Patients with back pain associated with paralysis or gross muscle weakness
- Patients with bilateral neurologic deficits associated with bowel or bladder function loss
- Patients in whom an epidural hematoma or epidural abscess is suspected
- Postoperative patients with a recent lumbar laminectomy or hip replacement

Improvement occurs in almost all patients within 4-6 weeks, except those with infection, occult malignancy, or systemic illness. If pain fails to significantly improve or resolve in this time frame, imaging is always indicated

#### Other Tests

- Perform the straight leg raising test with the patient in a supine position. Record the response to raising each leg. An approximation of the test may be performed with the patient sitting and each leg straightened at the knee. The examiner should take care to make sure that the quadriceps muscle is relaxed while passively raising the leg to ensure that the sciatic nerve is being adequately stretched during the testing. If the quadriceps is contracted, it will take the pressure off the sciatic nerve and may give a false-negative result
- The stoop test helps distinguish true claudication from pseudoclaudication. Patients with true claudication sit down to rest when pain occurs, while patients with pseudoclaudication attempt to keep walking by stooping or flexing the spine to relieve the stretch on the sciatic nerve

#### Emergency Care

If new neurologic deficits are noted accompanied by bowel or bladder dysfunction one should suspect cauda equina syndrome. This is a true emergency, and emergency imaging is mandated. MRI is the preferred imaging modality in this situation. If cauda equina syndrome is strongly suspected, the practitioner should consider giving dexamethasone without delay to prevent further loss of neurologic function while pursuing confirmatory testing

Conservative therapy is the mainstay of treatment, as even those with true sciatica generally respond. Ultimately, only 2% of patients with sciatica and 4-6% of patients with true disc herniation require surgery. Conservative therapy traditionally includes the following:

- Bed rest, once the cornerstone of treatment, is no longer widely recommended
  - A growing body of evidence suggests that even brief bed rest is not necessary except in patients with true sciatica. In this case, the supine position decreases pressure on the spinal cord itself, and is useful for the first 2-3 days
  - Early mobilization with gentle range of motion and strengthening exercises are recommended for patients with nonsciatic back pain
  - Early return to work on light duty or restricted activity lead to better long-term outcomes. Early return to work on light duty or restricted activity lead to better long-term outcomes

- Pharmacologic therapy involves both anti-inflammatory medication and muscle relaxants
- Narcotics may be used initially to gain relief, but their long-term use is associated with increased functional impairment
- Steroids, while highly recommended by some practitioners, lack prospective confirmation of their value. Some physicians may prescribe a single burst or short course of oral steroids, which can be beneficial, particularly in those with a significant degree of inflammation
- Epidural steroid injection may also bring significant short-term relief, but this treatment is not without adverse effects and has not been shown to provide lasting benefit
- Unless the patient is allergic to the medicine or it is otherwise contraindicated, severe low back pain can be improved significantly with a combination of nonsteroidal anti-inflammatory drugs (NSAIDs) and muscle relaxants
- Use of hot or cold compresses has never been proven scientifically to speed symptom resolution, but some patients may experience brief relief
- Gentle flexion/extension exercises are helpful
- Spinal traction is ineffective

Evidence-based clinical practice guidelines from the American Pain Society (APS) for patients with chronic low back pain describe the use of interventional diagnostic tests and therapies, surgeries, and interdisciplinary rehabilitation

- Practice guidelines for nonradicular pain
  - Interdisciplinary rehabilitation emphasizing cognitive-behavioral approaches should be considered for patients who do not respond to usual interventions
  - Provocative discography (injecting material into a disc nucleus in an attempt to reproduce the patient's typical pain) is not recommended
  - Facet joint corticosteroid injection, prolotherapy (repeated injections of irritant material to stimulate an inflammatory response), and intra discal corticosteroid injection are not recommended
  - Persistent disabling symptoms and degenerative spinal changes should prompt discussion and shared decision-making regarding surgery or interdisciplinary rehabilitation (evidence is insufficient to weigh the risks and benefits of vertebral disc replacement in these patients)
- Practice guidelines for persistent radiculopathy
  - For patients with herniated discs, the use of epidural steroid injection should be discussed
  - For patients with herniated discs and disabling leg pain from spinal stenosis, surgical options should be discussed
  - For patients with persistent pain after surgery, the risks and benefits of spinal cord stimulation should be discussed

## Medication

The goal of pharmacotherapy is to reduce pain and inflammation

## NSAID

NSAIDs are most commonly used to relieve mild to moderate pain. Although the effectiveness of NSAIDs tends to be patient specific, ibuprofen is usually the DOC for initial therapy. Other options include flurbiprofen, diclofenac ketoprofen, and naproxen

## Muscle relaxants

These agents reduce tonic somatic motor activity of the muscle

Cyclobenzaprine, Orphenadine etc

## Analgesics

Pain control is essential to ensure patient comfort, to promote pulmonary toilet, and to aid physical therapy regimens. Many analgesics have sedating properties that benefit patients who have sustained injuries

## Duloxetine (Cymbalta)

Potent inhibitor of neuronal serotonin and norepinephrine reuptake. Indicated for chronic musculoskeletal pain, including discomfort from osteoarthritis and chronic lower back pain

## Acetaminophen

Acetaminophen and codeine

## Tramadol

## Inpatient Care

- Patients with cauda equina syndrome, epidural abscess, spinal tumor, systemic illnesses, or those with poor social support should be admitted for further evaluation and management
- Referral to an orthopedic or a neurosurgeon may be necessary. The patient's primary physician should be contacted regarding the referral

## Prevention

- Back muscle strengthening exercises have value in preventing future episodes of low back strain
- Weight loss in overweight patients results in less strain on back muscles
- Practicing proper lifting techniques results in less back strain
- General overall improvement of physical conditioning can decrease low back pain exacerbation

## Prognosis

The prognosis is good for most patients who present with mechanical back pain

- Overall, 70% of patients feel better in 1 week; 80%, in 2 weeks; and 90%, in 1 month

- Only 10% of all patients with low back pain have long-term problems
- A significant functional overlay or component of secondary gain is present in a subgroup of patients, who also account for the majority of office visits with low back pain complaints (see Causes section)
- Recurrence is common and seen in up to 40% of patients within 6 months. Prevention methods should be discussed with patients with low back pain along with encouragement to monitor them when the acute period has resolved
- Psychosocial factors such as presence of posttraumatic stress disorder, use of a lawyer, presence of other chronic illnesses, and lower education levels appear to be positive predictors of development of chronic back pain in patients who sustain an initial injury to their back. Chronic back pain development was not associated with age, gender, occupation, or severity of original injury

## Patient Education

Patient education focuses on prevention and includes the following:

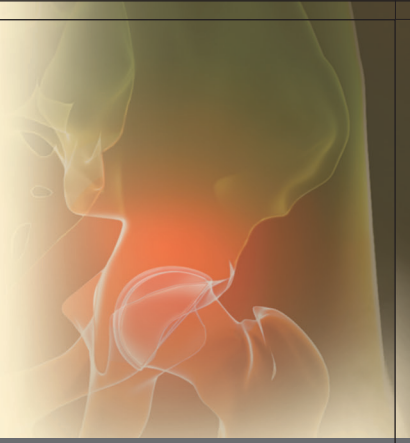
- Promoting weight loss where indicated
- Performing back strengthening exercises
- Teaching proper lifting technique
- Increasing overall physical conditioning
- Back belts, which are commonly worn in occupations with heavy lifting, have not been proven to prevent back injury

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## ***I feel saddened when a patient walks into my clinic with hands like these***

Dr. Ahmed Iqbal Mirza Consultant Rheumatologist  
Aga Khan University Hospital, Karachi



As rheumatologists, we probably feel impotent when faced with this sort of late disease. Joint and bony destruction has occurred. There is obvious deformity that cannot be reversed. We've missed the boat

I wonder how many doctors and health professionals may take the attitude that it's just too late to be able to treat

While I of course agree that the deformity cannot be reversed, any inflammation should still be treated as best we can. We can be surprised by what can be achieved by reducing pain and swelling. Even small gains may lead to useful gains in function and can improve quality of life

These hands belong to an elderly lady. She has had 30+ years of essentially untreated disease. She was just too afraid to take the "powerful" drugs and had heard too many stories about the bad side effects

She is now on low dose Prednisone with some Methotrex-

ate (the Methotrexate is acting as a medication that will help reduce the dose of steroid required, a steroid-sparing agent). This combination has helped her pain, reduced the amount of swelling around the joints and reduced the inflammatory markers measured in her blood

While she still cannot grip a mug and still struggles to walk due to the corresponding deformity in her feet, knees, ankles and hips, she reports through her son that she can do more. She's grateful for some reduction in stiffness and for the minor increase in her ability to get out of a chair

Rheumatologists focus on the **Window of Opportunity** and this concept highlights the need to treat rheumatoid arthritis as early as possible with aggressive treatment as needed

These hands show you why. Sometimes, we do miss this window of opportunity and the patient presents late. Even then, it's not too late to help



# SLE a common disease which is not commonly diagnosed!!

Prof. Dr. Tafazzul Haq Consultant Physician and Rheumatologist  
Sheikh Zayed Hospital, Lahore

Systemic lupus erythematosus (SLE) can cause various symptoms, the most common being joint pains, skin rashes and tiredness. Problems with kidneys and other organs can occur in severe cases. Treatment includes anti-inflammatory painkillers to ease joint pains. Steroids and/or other medication are sometimes also needed

## What is systemic lupus erythematosus?

Systemic lupus erythematosus (SLE) is a chronic (persistent) disease that causes inflammation in various parts of the body. It is commonly just called SLE or 'lupus'. The severity of SLE ranges from mild to severe. There are two main forms of lupus. Discoid lupus only affects the skin and is not discussed here. The other form is SLE, which involves the skin and joints and may involve internal organs such as the heart or kidney as well

## Who gets systemic lupus erythematosus?

SLE affects about 5 in 10,000 people in the UK. It is probably more common in Pakistan but is under diagnosed and often confused with tuberculosis due to fever and raised ESR. It is ten times more common in women than in men. It most typically develops in women aged between 20 and 40. However, anyone at any age can be affected. It is more common in people from Afro-Caribbean, Asian, or Chinese origin. Although SLE can run in families, only 3 in 100 children of people with SLE will actually develop the disease

## What causes systemic lupus erythematosus?

SLE is an autoimmune disease. This means that the immune system (which normally protects the body from infections) mistakenly attacks itself. This can cause symptoms and may damage the affected parts of the body. It is the uncontrolled formation of immune complexes in the body that leads to the damage caused by lupus of various organs. It is not known why SLE occurs. Some factor may trigger the immune system to attack itself. Possible triggers of SLE include infections, drugs (for example, minocycline or hydralazine) or sunlight. Hormonal changes may play a role in SLE, which could explain why it is much more common in women

## What are the symptoms of systemic lupus erythematosus?

The symptoms and severity of SLE vary tremendously between people. Many people have fatigue (tiredness), weight loss and a mild fever. In addition, one or more of the following may develop

### Joint and muscle pains

Most people with SLE develop some joint and muscle pains. Sometimes only a few joints are affected, whereas other people have many joints affected. The small joints of the hands and feet tend to be the ones affected most. The pains may 'flit' from joint to joint. Joint stiffness is common and is usually worse first thing in the morning. Mild joint swelling may occur but severe arthritis with joint damage is unusual

### Skin, mouth and hair

A red rash which develops over the cheeks and nose is common (the 'butterfly rash'). Other areas of skin exposed to sunlight (hands, wrists,

etc) may also develop a rash. About 6 in 10 people with SLE find that their skin is very sensitive to sunlight. Various other rashes may develop. The blood vessels just under the skin may also be affected and cause poor circulation to the fingers and toes (Reynaud's phenomenon). Mouth ulcers are more common in people with SLE. Some hair may fall out (alopecia). Any hair loss tends to be minor and cause hair 'thinning' rather than bald patches. However, quite serious hair loss sometimes develops, although the hair often grows back when SLE is less active

## Blood and lymph

A mild anemia is common. Other blood problems, such as reduced numbers of white blood cells or platelets (the cells that help the blood to clot), are less common. A tendency to form blood clots is an uncommon complication. Some lymph glands may swell

## Heart and lungs

The tissues that cover the heart and lung (the pleura and pericardium) may become inflamed. This can cause pleurisy (pains in the side of the chest) or pericarditis (central chest pains). The actual heart or lung tissue is less commonly affected

## Kidneys

Around 1 in 3 people with SLE may develop inflammation of the kidneys, which can lead to the kidneys leaking protein and blood into the urine. This does not usually cause problems unless the disease is very severe. Kidney failure is an uncommon complication

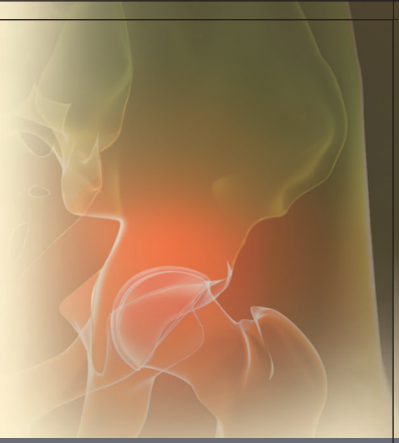
## Brain and nervous system

Mental health problems in SLE are fairly common and include depression and anxiety. Although mild depression can be part of the disease itself, it can also be due to your reaction to having a serious illness. It is not uncommon for people to have difficulties in coping with having SLE. It is important to share any feelings you have with your doctor, as treatment can be really beneficial. Occasionally, inflammation of the brain can lead to epilepsy, headaches, migraines and other conditions

## How does systemic lupus erythematosus progress?

In some cases, the symptoms develop quite slowly. At first they may be confused with other problems, as there are many possible causes of joint pains and tiredness. Sometimes several symptoms occur together. Symptoms range from mild to severe. For example:

- **Mild SLE.** Many people with SLE just have joint and/or skin symptoms with tiredness. These are unpleasant but are not serious or life-threatening
- **Moderate SLE.** This includes some inflammation of other parts of the body apart from joints and skin. This may include pleurisy, pericarditis or mild kidney inflammation
- **Severe SLE.** In some cases, severe inflammation develops which can cause damage to organs such as the heart, lung, brain or kidneys. This can even be life-threatening



Typically, there are times when the disease flares up (relapses) and symptoms become worse for a few weeks, sometimes longer. These relapses tend to alternate with times when symptoms settle down (remission). The reason why symptoms flare up or settle down is not yet fully understood

### How is systemic lupus erythematosus diagnosed?

If symptoms suggest SLE then doctor will usually do some blood tests. Most people with SLE have an antibody called antinuclear antibody in their blood. (Antibodies are small proteins that are part of the immune system.) Another antibody called anti-double-stranded DNA (anti-dsDNA) is often present in people with SLE. Various other antibodies are also associated with SLE. However, they can also occur in perfectly well people who do not have SLE. Typical symptoms combined with high levels of certain antibodies usually indicate that you have developed SLE

Once SLE is diagnosed, you will normally be advised to have regular checks and tests. For example, regular blood tests to check for anemia and urine tests to check for kidney problems. A blood test to measure a blood chemical called 'complement' (another part of the immune system) can assess the activity of the disease. The level of this chemical reflects how 'active' the disease is

Other tests including scans and X-rays may be advised to check on the function of the heart, kidneys and other organs if the disease is thought to be affecting these areas of the body

### What are the treatments for systemic lupus erythematosus?

Although there is no cure for SLE, this condition can usually be controlled and symptoms eased. Most people with SLE are seen regularly by a specialist who advises on treatment. The treatments may vary from time to time, depending on the severity of the disease or flare-up of symptoms and also which parts of the body are affected. You may even not need any treatment if you have very mild symptoms

Treatment options include the following:

#### Non-steroidal anti-inflammatory drugs (NSAIDs)

These are often called anti-inflammatory painkillers and are commonly prescribed to ease joint or muscle pains. Examples of these are ibuprofen, naproxen and diclofenac. The main possible side-effects from NSAIDs are stomach and gut problems such as pain or bleeding in the stomach. If necessary, other medication can be prescribed to protect the stomach from these possible side-effects

#### Hydroxychloroquine

Hydroxychloroquine is often effective at improving skin problems, tiredness and joint pains that are not well controlled by NSAIDs. It is not clear how this drug works in SLE. It may take 6-12 weeks for it to become fully effective. The dose is often reduced to a lower 'maintenance' dose once symptoms have eased. Many people with SLE take this drug long-term to keep symptoms away. Side-effects are uncommon. The most serious is damage to the eye, which is unusual

#### Steroids

Steroid tablets are usually advised if patient develops more severe symptoms. Steroids reduce inflammation and the dose is usually given at the lowest possible dose, in order to reduce any side-effects from the steroids. Steroids may cause side-effects if taken for long periods. These include thinning of the bones (osteoporosis), thinning of the skin, weight gain, muscle wasting, high blood pressure and other problems

#### Immunosuppressants

Drugs such as azathioprine, ciclosporin, cyclophosphamide, methotrexate and mycophenolate may be advised if you have severe SLE. These drugs are called immunosuppressive drugs because they work by suppressing the immune system. One side-effect of these drugs is that the patient will be more prone to developing infections

#### What is the prognosis (outlook) for people with systemic lupus erythematosus?

Most people with SLE lead active, normal lives. The outlook for people with SLE is much better than it was in the past. Modern treatments are more effective. For many people with SLE, symptoms are mild or moderate with little risk to life. The joint and skin symptoms may persist, but can usually be eased with treatment. For most people with SLE, the pattern of their disease becomes established within ten years; so, if serious problems have not developed in this time then they are unlikely to do so

For a few people, SLE is severe and can be life-threatening. Severe inflammation of the kidneys, leading to kidney failure, can rarely occur. Severe brain involvement is also rare but can be very serious. However, modern immunosuppressive treatments have improved the outlook, even for people with severe disease. Some people find that symptoms settle in their middle age and they can come off all treatment

#### Some other points about systemic lupus erythematosus

- **Avoid the sun.** Strong sunlight can aggravate symptoms of SLE. Long-sleeved clothing and wide-brimmed hats are best in sunny weather. Patients should be advised to wear a sun block on exposed skin with a protection factor of 25 or above that protects against UVA and UVB
- **Try to avoid infections.** Patients with SLE are more prone to infection, particularly if they take steroids or immunosuppressant medication. Avoid contact with people who have infections
- **Pregnancy.** Although fertility is not usually affected in people SLE, some women with SLE have a higher chance of miscarriage. Women who have badly inflamed kidneys, due to SLE, may have high blood pressure in pregnancy. However, most women with mild or well controlled SLE at the start of pregnancy are likely to go through pregnancy with few problems
- **Some contraceptive pills** may not be advised depending on disease severity. A doctor or nurse will advise on the best method of contraception
- **Other autoimmune diseases** such as Sjögren's syndrome and thyroid problems are more common than average if your patients have SLE. These are sometimes tested for in people with SLE

# Choosing Anti-Inflammatory Drugs for easing chronic pain

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Even mild chronic pain -- whether from arthritis, migraines, or another condition -- can be debilitating. So it makes sense to take a pain reliever to make the hurt go away. How do we know which pain pill to choose? And just what is the difference between Aspirin, Panadol, Acetaminophen, Diclofenac or Ibuprofen?

Aspirin and Diclofenac belong to a large class of drugs known as non-steroidal anti-inflammatory drugs, commonly called NSAIDs. NSAIDs and acetaminophen can block pain and reduce fever. Together, they make up the most widely used group of drugs for treating pain conditions. Here's information you can use in working with your patients to find out if these pain pills are your right choice

## How do Anti-inflammatories, or NSAIDs, differ from Acetaminophen?

The primary difference between NSAIDs and Acetaminophen lies in the way each relieves pain. Acetaminophen works primarily in the brain to block pain messages and seems to influence the parts of the brain that help reduce fever. That means it can help relieve headaches and minor pains. But it's not as effective against pain associated with inflammation. Inflammation is a common feature of many chronic conditions as well as injuries. NSAIDs reduce the level of certain chemicals called prostaglandins that are involved in inflammation. Treatment with NSAIDs can lead to less swelling and less pain

## What are some examples of NSAIDs?

Aspirin is a widely used pain pill and at one time, aspirin was the only NSAID available without a prescription in west, in our country there is no concept of over the counter drugs

## Examples of NSAIDs include:

- Diclofenac
- Ibuprofen
- Etodolac
- Flurbiprofen
- Naproxen
- Oxaprozin

Another kind of NSAID commonly used is known as COX-2 inhibitor. These medicines provide pain relief like other NSAIDs, but they are less likely to cause stomach problems. The most common COX-2 inhibitor being used in our country is celecoxib

Another class of NSAID used is non-selective COX-2 inhibitor, example: Meloxicam

## How do I know which NSAID will work for my Patients with Chronic Pain?

The effectiveness of any particular pain medication varies from person to person. So it may be necessary to try several different medicines at various dosages. Side effects and their severity vary from person to person. One may not be able to take a particular NSAID because his or her body can't tolerate it. At the same time, other patient may take it and have no problem at all

These drugs can have major side effects on person if needed for longer duration. This is commonly seen if these medicines are given for more than 10 days

A detailed history and complete medical examination is very important before prescribing any NSAID

## Before recommending a specific pain pill, consider:

- Past medical history
- Past surgeries
- Current health concerns
- Allergies and past reactions to drugs
- Other medicines patient is taking
- The functioning of your liver and kidneys
- The drug's expense
- Your overall treatment plan and goals

## Are there side effects and special cautions associated with NSAIDs?

Specific side effects vary from drug to drug. For instance, some NSAIDs are harsher on the stomach than others. But there are certain side effects that are common to NSAIDs as a class. Serious side effects include:

- Bleeding problems
- Damage to the stomach and small intestine lining that can lead to ulcers
- Kidney disease
- Elevated blood pressure
- Muscle cramps
- Hearing problems

## Other side effects include:

- Dizziness or headache
- Nausea
- Excess gas
- Diarrhea or constipation
- Extreme tiredness or weakness
- Dry mouth

In addition to side effects, there is serious health risks associated with NSAIDs, particularly if patient is allergic to aspirin or any other pain reliever. Other important factors are:

- If he takes alcohol
- Past history of stomach ulcers or G.I. bleeding
- History of heart disease
- If he takes blood-thinning medicine or have a bleeding disorder

Although aspirin taken in low doses can help protect some people from heart attack, certain NSAIDs can increase risk of heart disease and stroke. They can also interfere with blood pressure medicine, making it less effective

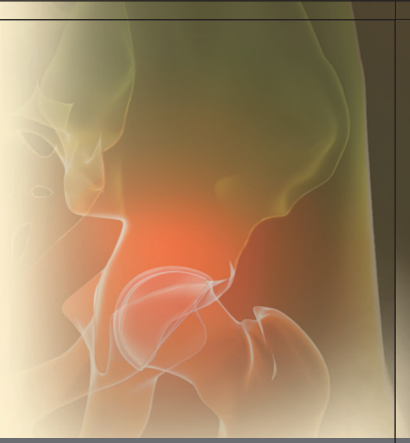
Children and teenagers under the age of 18 should not take aspirin for pain, unless advised for any specific reasons by doctors. There is a risk of Reye's syndrome, a potentially fatal disease

## NSAID to manage Chronic Pain

Anti-inflammatory drugs have a long history of success. Many people are able to manage their chronic pain quite well using NSAIDs as part of their management plan. For most, side effects, if any, are minor. But all medications have associated risks. All medications also have benefits. Deciding to take an NSAID or any medication involves weighing the risk against the benefit

The bottom line: take good history, talk with your patient. Level of risk depends on the state of your patients overall health. Think safe play smart would be right and smart choice for our patient

# Quiz



Hand picture of a patient with Rheumatoid Arthritis what abnormalities visible in the picture

1. \_\_\_\_\_ 2. \_\_\_\_\_

