HALEON

Patient **case study.**

Musculoskeletal pain

#ListenToPain

Brought to you by the makers of

Panadol

Voltaren
The joy of movement

Start here ›

Andrew

52 years.

Andrew hurt his lower back while playing squash.

The initial severe pain is better, however, he still has a dull ache which is a cause of irritation.

He complains of a shooting pain down his legs when he bends down to tie his shoelaces.

Past history and family history:

Hypertensive
for 3 years and further investigations revealed dyslipidemia.

At present, takes lisinopril and atorvastatin tablets for hypertension and dyslipidemia, respectively.

No family history
of any medical illness.

He requests medication.

What do **you advise?**

Clinical examination

- General appearance:
  Appeared uneasy and tense.
- Well-nourished.
- BP: 134/88mmHg, PR: 78bpm.
- BMI: 26.0kg/m^2.
- Lungs/CVS/Abdomen: NAD.
- CNS: NAD.
- Gait: Stable.
- Increase in pain and tenderness in lower back on movement and bending, limited range of spinal motion, negative straight leg raise test, no paresthesia, normal reflexes.

BMI, body mass index; BP, blood pressure; CNS, central nervous system; CRP, C-reactive protein; CVS, cardiovascular system; ESR, erythrocyte sedimentation rate; NAD, nothing abnormal detected; PR, pulse rate.

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Clinical examination

What could be the possible cause for stiffness and pain in Andrew?

Click an option to select your answer.

ACUTE MUSCULO-SKELETAL INJURY

FRACTURE

INFECTION

CAUDA EQUINA SYNDROME

#ListenToPain

Clinical examination

What could be the possible cause for stiffness and pain in Andrew?

Click an option to select your answer.

ACUTE MUSCULO-SKELETAL INJURY

× **FRACTURE**

INFECTION

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ACUTE MUSCULO-SKELETAL INJURY

FRACTURE

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Clinical examination

What could be the possible cause for stiffness and pain in Andrew?

Click an option to select your answer.

✓ **ACUTE MUSCULO-SKELETAL INJURY**

FRACTURE

INFECTION

CAUDA EQUINA SYNDROME

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Clinical examination

What are the red flags that should be looked out for in a patient like Andrew?

	 Possible fracture	 Possible tumour or infection	 Possible cauda equina syndrome
From medical history			
	• Major trauma, such as vehicle accident or fall from height. • Minor trauma or even strenuous lifting in an older, or potentially osteoporotic, patient.	• Age over 50 or under 20. • History of cancer and/or constitutional symptoms, such as recent fever or chills or unexplained weight loss. • Risk factors for spinal infection: recent bacterial infection (e.g., UTI), IV drug abuse, or immune suppression, (e.g., from corticosteroids, transplant or HIV). • Pain that worsens when supine and/or severe night-time pain.	• Saddle anaesthesia. • Recent onset of bladder dysfunction, such as urinary retention, increased frequency, or overflow incontinence. • Severe or progressive neurological deficit in the lower extremity.
From clinical examination			
			• Peri-anal/perineal sensory loss. • Major motor weakness: quadriceps (knee extension weakness); plantar flexors, evertors and dorsiflexors (foot drop).

HIV, human immunodeficiency virus; IV, intravenous; UTI, urinary tract infection.

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Differential diagnosis

What could the possible cause for the pain be in patients like Andrew?

Acute musculoskeletal pain[1,2]

- Ache, spasm.
- Increases with activity or bending.
- Local tenderness, limited spinal motion.

Tumour[3-5]

- Unexplained weight loss, fever or chills.
- Past history of malignant tumour.

Infection[3-5]

- Recent bacterial infection, IV drug abuse, immunocompromised condition.
- Severe pain at night.

Cudaeq equina syndrome[3-5]

- Bladder dysfunction (urinary retention, occasional overflow incontinence).
- Sphincter disturbance.
- Saddle anaesthesia.
- Global or progressive weakness in the lower limbs or gait disturbance.

IV, intravenous.

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Approach to management of acute musculoskeletal pain.

01

What are the modalities of treatment?

02

What is the clinical evidence?

03

What do guidelines say regarding the most suitable management?

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Treatment plan

What modalities can be used to treat patients like Andrew?

Click an option to select your answer.

PHYSICAL THERAPY

PATIENT EDUCATION

PHARMACOLOGICAL MANAGEMENT

ALL OF THE ABOVE

#ListenToPain

Treatment plan

What modalities can be used to treat patients like Andrew?

Click an option to select your answer.

× PHYSICAL THERAPY

PATIENT EDUCATION

PHARMACOLOGICAL MANAGEMENT

ALL OF THE ABOVE

#ListenToPain

Treatment plan

What modalities can be used to treat patients like Andrew?

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PHYSICAL THERAPY

× **PATIENT EDUCATION**

PHARMACOLOGICAL MANAGEMENT

ALL OF THE ABOVE

#ListenToPain

Treatment plan

What modalities can be used to treat patients like Andrew?

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PHYSICAL THERAPY

PATIENT EDUCATION

× **PHARMACOLOGICAL MANAGEMENT**

ALL OF THE ABOVE

#ListenToPain

Treatment plan

What modalities can be used to treat patients like Andrew?

Click an option to select your answer.

- ✓ PHYSICAL THERAPY
- ✓ PATIENT EDUCATION
- ✓ PHARMACOLOGICAL MANAGEMENT
- ✓ **ALL OF THE ABOVE**

What modalities can be used to treat patients like Andrew?

- Adequate rest for 2-3 days and slowly resume daily activities[1,2]
- Physical therapy e.g., superficiaI heat[2]
- Patient education to avoid re-injury[1]
- Pharmacological management e.g., topical and/or oral analgesics[3]

1. NSW Therapeutic Assessment Group. Low back pain. Rational use of opioids in chronic or recurrent non-malignant pain: prescribing guidelines for primary care clinicians. Available at: www.nswtag.org.au/wp-content/uploads/2017/08/pain-low-back-gp-dec-2002.pdf (last accessed May 2021).
2. Accident Compensation Corporation (ACC). New Zealand acute low back pain guide. Available at: www.acc.co.nz/assets/provider/lower-back-pain-guide-acc1038.pdf (last accessed May 2021). 3. Annals of Internal Medicine. Noninvasive treatments for acute, subacute, and chronic low back pain: A clinical practice guideline from the American College of Physicians. Available at: www.acpjournals.org/doi/full/10.7326/M16-2367 (last accessed May 2021).

Treatment plan

Lifestyle modifications for Andrew.

Weight management[1]

Reduction of strenuous physical activity[2]

Ergonomic adaptations in the workplace[1,3]

Appropriate posture training for sitting, driving and lifting[1,3]

1. NSW Therapeutic Assessment Group. Low back pain. Rational use of opioids in chronic or recurrent non-malignant pain: prescribing guidelines for primary care clinicians. Available at: www.nswtag.org.au/wp-content/uploads/2017/08/pain-low-back-gp-dec-2002.pdf (last accessed May 2021). 2. Accident Compensation Corporation (ACC). New Zealand acute low back pain guide. Available at: www.acc.co.nz/assets/provider/lower-back-pain-guide-acc1038.pdf (last accessed May 2021). 3. Annals of Internal Medicine. Noninvasive treatments for acute, subacute, and chronic low back pain: A clinical practice guideline from the American College of Physicians. Available at: www.acpjournals.org/doi/full/10.7326/M16-2367 (last accessed May 2021).

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Treatment plan

What are the **therapeutic options** for patients with **MSK pain?**

Click an option to select your answer.

TOPICAL DICLOFENAC

PARACETAMOL

IBUPROFEN

ALL OF THE ABOVE

MSK, musculoskeletal.

#ListenToPain

HALEON

Treatment plan

What are the **therapeutic options** for patients with **MSK pain?**

Click an option to select your answer.

× **TOPICAL DICLOFENAC**

PARACETAMOL

IBUPROFEN

ALL OF THE ABOVE

MSK, musculoskeletal.

#ListenToPain

HALEON

Treatment plan

What are the **therapeutic options** for patients with **MSK pain?**

Click an option to select your answer.

TOPICAL DICLOFENAC

× **PARACETAMOL**

IBUPROFEN

ALL OF THE ABOVE

MSK, musculoskeletal.

#ListenToPain

HALEON

Treatment plan

What are the **therapeutic options** for patients with **MSK pain?**

Click an option to select your answer.

TOPICAL DICLOFENAC

PARACETAMOL

× **IBUPROFEN**

ALL OF THE ABOVE

MSK, musculoskeletal.

#ListenToPain

HALEON

Treatment plan

What are the **therapeutic options** for patients with **MSK pain?**

Click an option to select your answer.

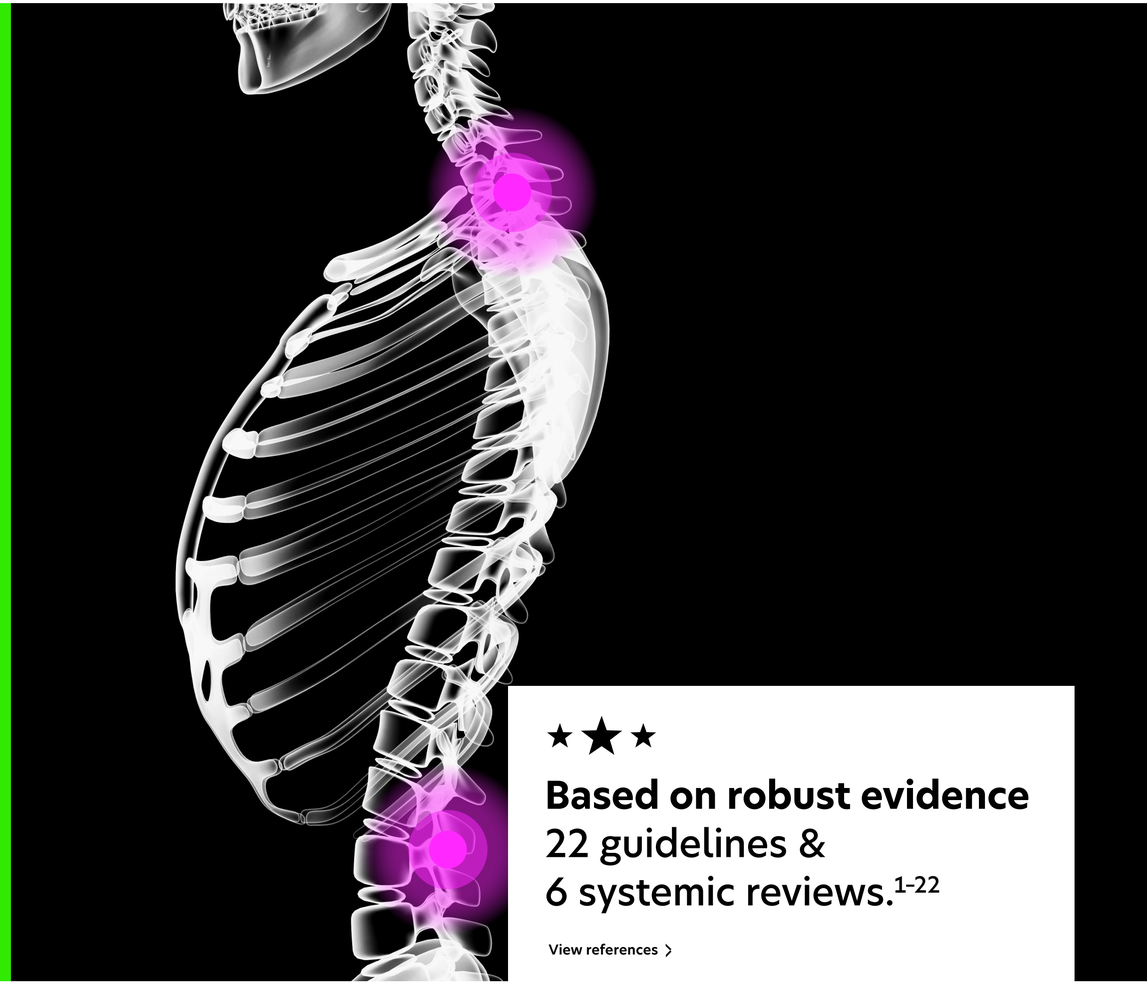
- ✓ TOPICAL DICLOFENAC
- ✓ PARACETAMOL
- ✓ IBUPROFEN
- ✓ **ALL OF THE ABOVE**

MSK, musculoskeletal.

Clinical evidence

What do guidelines recommend?

- High-grade evidence for use of **topical diclofenac.**
  - Effective for acute musculoskeletal pain, such as sprains, with minimal adverse event profile.
- Both paracetamol and ibuprofen show comparable efficacy, however, the quality of evidence evaluated was low.



★★★

Based on robust evidence
22 guidelines &
6 systemic reviews.[1–22]

View references >

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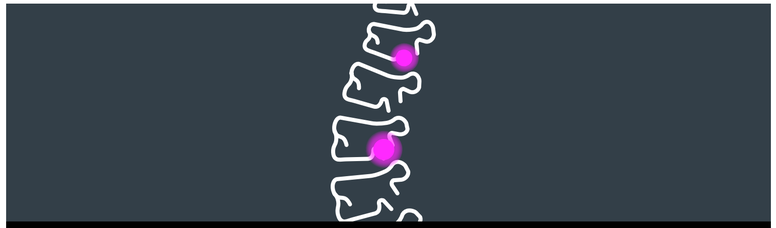
21. Rached R, *et al. AMB* 2013;59(6):536–553.

22. Hussein A, *et al.* Malaysian low back pain management guideline. Malaysian association for the study of pain. Available at: www.masp.org.my/index.cfm?&menuid=23 (last accessed May 2021).

Clinical evidence



Musculoskeletal pain

Topical diclofenac
Recommended first-line for:

- MSK pain
- GI risks
- CVD
- Elderly

Paracetamol
Recommended for:

- GI risks
- CVD
- Elderly

Ibuprofen
Limited use

- Most guidelines recommend topical diclofenac as first-line treatment for acute MSK pain.
- Only a few guidelines recommend paracetamol as first-line therapy.

CVD, cardiovascular disease; GI, gastrointestinal; MSK, musculoskeletal.

1. Saragiotto B, *et al. Cochrane Database of Syst Rev* 2016(6):CD012230. 2. Davies R, *et al. Eur Spine J* 2008;17(11):1423–1430. 3. Ridderikhof M, *et al. Emerg Med J* 2019;36(8):493–500.

#ListenToPain

Clinical evidence

Which is the most suitable option for Andrew?

Click an option to select your answer.

TOPICAL DICLOFENAC

PARACETAMOL

IBUPROFEN

TOPICAL DICLOFENAC + PARACETAMOL

#ListenToPain

Clinical evidence

Which is the most suitable option for Andrew?

Click an option to select your answer.

× TOPICAL DICLOFENAC

PARACETAMOL

IBUPROFEN

TOPICAL DICLOFENAC + PARACETAMOL

#ListenToPain

Clinical evidence

Which is the most suitable option for Andrew?

Click an option to select your answer.

TOPICAL DICLOFENAC

× PARACETAMOL

IBUPROFEN

TOPICAL DICLOFENAC + PARACETAMOL

#ListenToPain

Clinical evidence

Which is the most suitable option for Andrew?

Click an option to select your answer.

TOPICAL DICLOFENAC

PARACETAMOL

× **IBUPROFEN**

TOPICAL DICLOFENAC + PARACETAMOL

#ListenToPain

Clinical evidence

Which is the most suitable option for Andrew?

Click an option to select your answer.

TOPICAL DICLOFENAC

PARACETAMOL

IBUPROFEN

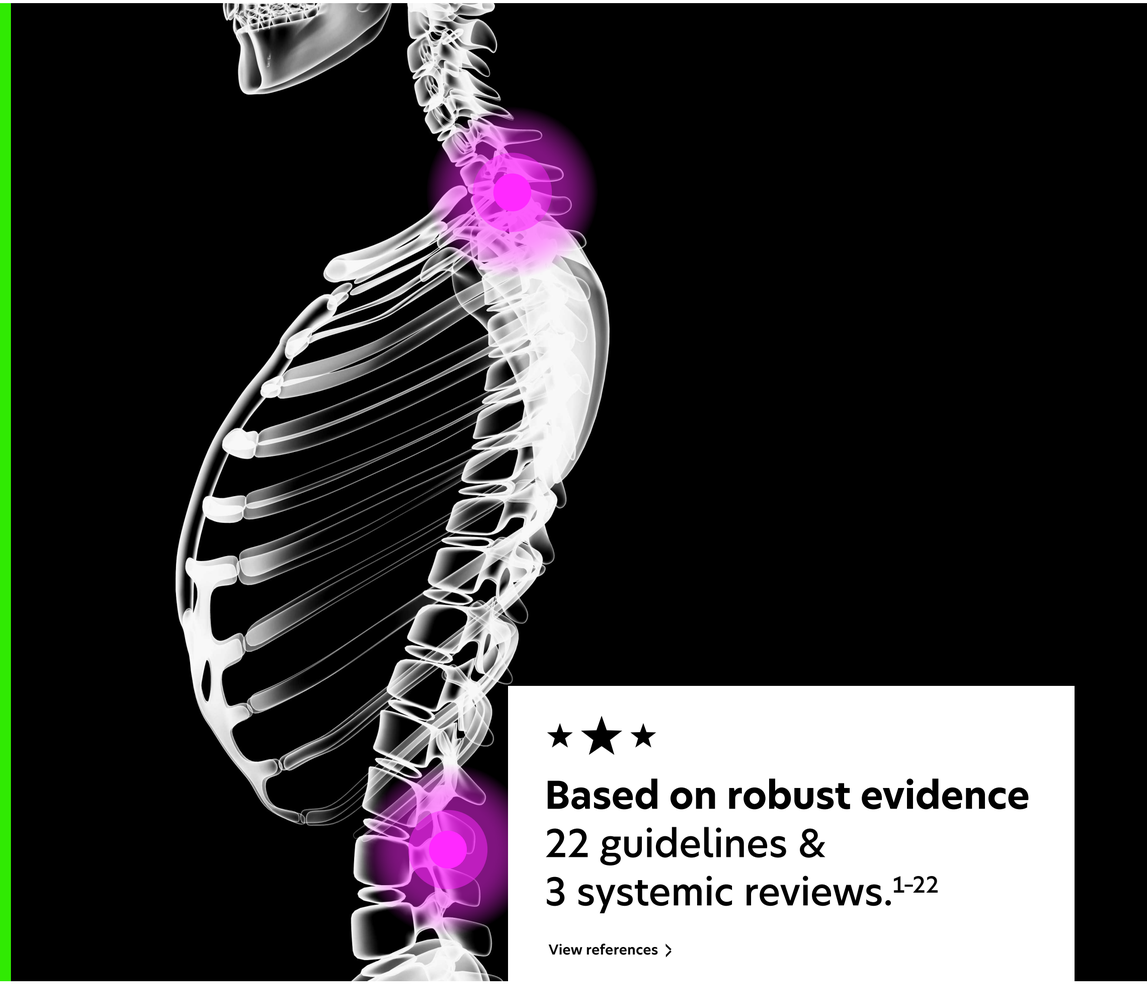
✓ **TOPICAL DICLOFENAC + PARACETAMOL**

If topical diclofenac is not enough then add paracetamol

Clinical evidence

What do guidelines recommend?

- **Topical diclofenac:** the latest systematic review based on 11,000 participants demonstrated that topical diclofenac is a suitable, effective first-line treatment for acute MSK pain, such as sprains, strains, and sports-related injuries with minimal reported adverse events.[23-25]
- There is insufficient evidence regarding the comparative effectiveness of paracetamol and ibuprofen alone in relieving MSK pain.
- Most of the guidelines recommend paracetamol while few also recommend its use as first-line therapy. In contrast, only limited number of guidelines recommend ibuprofen for management of musculoskeletal pain.
- However, paracetamol is the drug of choice in management of MSK pain in elderly and patients with risk of gastrointestinalor cardiovascular events.



★★★

Based on robust evidence
22 guidelines &
3 systemic reviews.[1-22]

View references >

MSK, musculoskeletal.

References

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25. Ridderlkhot M, *et al. Emerg Med* 2019;36(8):493–500.

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Clinical evidence

Andrew has hypertension and dyslipidemia.

Topical diclofenac
Recommended in first-line

- MSK pain
- GI risks
- CVD ✓
- Elderly

Paracetamol
Recommended in below population

- GI risks
- CVD ✓
- Elderly

Ibuprofen
Limited use

Guidelines recommend monotherapy with topical diclofenac or, if no improvement, oral paracetamol in combination with topical diclofenac.

CVD, cardiovascular disease; GI, gastrointestinal; MSK, musculoskeletal.

What next?

Andrew was asked to apply **topical diclofenac 1% gel (2g)** up to four times a day for up to 7 days, and follow a healthy lifestyle.

In case of persistent symptoms, combination therapy along with **oral paracetamol 500mg-1g SOS** can be advised.

During this course of treatment, **if symptoms worsen or persists beyond 7 days,** he is advised to consult his doctor.

SOS, as neccesary.

Summary

Andrew is a 52-year-old man who hurt his lower back while playing squash.

The initial severe pain got better; however, he still had a dull ache, which was a cause of irritation.

Additionally, he complained of a shooting pain when he bent down to tie his shoelaces.

On examination, there was pain and tenderness in lower back, which increased on movement and bending, limited range of spinal motion, negative straight leg raise test, no paresthesias, normal reflexes.

He was diagnosed with **acute musculoskeletal pain**.

He was recommended to apply topical diclofenac 1% gel (2g) up to four times a day for up to 7 days, and was asked to follow up after 1 week.

For Healthcare professionals only, Always read label before use.
If you wish to report any adverse event, product quality complaint, or Medical enquiry, please contact us at mystory.ae@haleon.com or +973 16500 404.
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