

Interventional procedures for musculoskeletal pain in ALS patients: A retrospective review

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INTRO

- 60% of patients with amyotrophic lateral sclerosis (ALS) live with pain.¹ Pain can arise at any stage of ALS, involve multiple body regions without a consistent pattern.²
- Pain may result from neural dysfunction, spasticity, or from weakness and immobility that cause degenerative changes in joints and soft tissues.
- Interventional pain procedures provide targeted relief and can reduce system medication side effects.
- However, pain procedures in ALS are seldom considered , likely due to limited research and provider unfamiliarity, leading to suboptimal pain management and missed opportunities to improve comfort and quality of life.

KEY QUESTIONS

1. What procedures for what pain conditions are performed?
2. Are there procedural considerations unique to ALS?
3. What’s the efficacy and safety?

METHODS

A chart review of ALS patients referred for interventional procedures for musculoskeletal pain was conducted at a single academic ALS center from July 2024 to June 2025.

RESULTS

1. Peripheral joint and tendon/bursa steroid injections were most common, but epidural and axial back pain interventions were performed. Shoulder injections was the most common (n=6, 43%).
2. Hip flexion spasticity/contraction favored ultrasound guidance, allowing semi-supine positioning.
3. 13/14 (93%) of procedures provided at least good pain relief; 45% of patients repeated procedures. No major complications were observed; transient hypertension was noted once.

CONCLUSION

- MSK issues (OA, tendinopathies) prevalent in older age but exacerbated in ALS were identified as targets for pain procedures.
- These procedures demonstrated high safety and efficacy in this ALS population.
- Coordinated, multidisciplinary care with timely access to interventional pain management procedures is essential for improved management of complex pain symptoms in patients with ALS.

Amyotrophic lateral sclerosis (ALS) exacerbates musculoskeletal conditions e.g. osteoarthritis, tendinopathies, bursitis.

Common pain procedures are safe and effective for pain relief and quality of life.

TABLE 1

Demographic (n=11)	N (%) or med (range)	Demographic (n=11)	N (%)
Age (years)	57 (38-80)	ALS history	
Gender		Sporadic	9 (82%)
Women	4 (36%)	Familial	2 (18%)
Men	7 (64%)	Onset	
Race		Limb	11 (100%)
White	9 (82%)	Bulbar	0 (0%)
Black	2 (18%)	Time to	
Other	0 (0%)	Diagnosis	4 m – 2 yr
Ethnicity		Procedure	9 m – 5 yr
Hispanic	0 (0%)	Pre-ALS diagnosis of	
Not Hispanic	11 (100%)	Chronic pain	2 (18%)

FIGURE 1

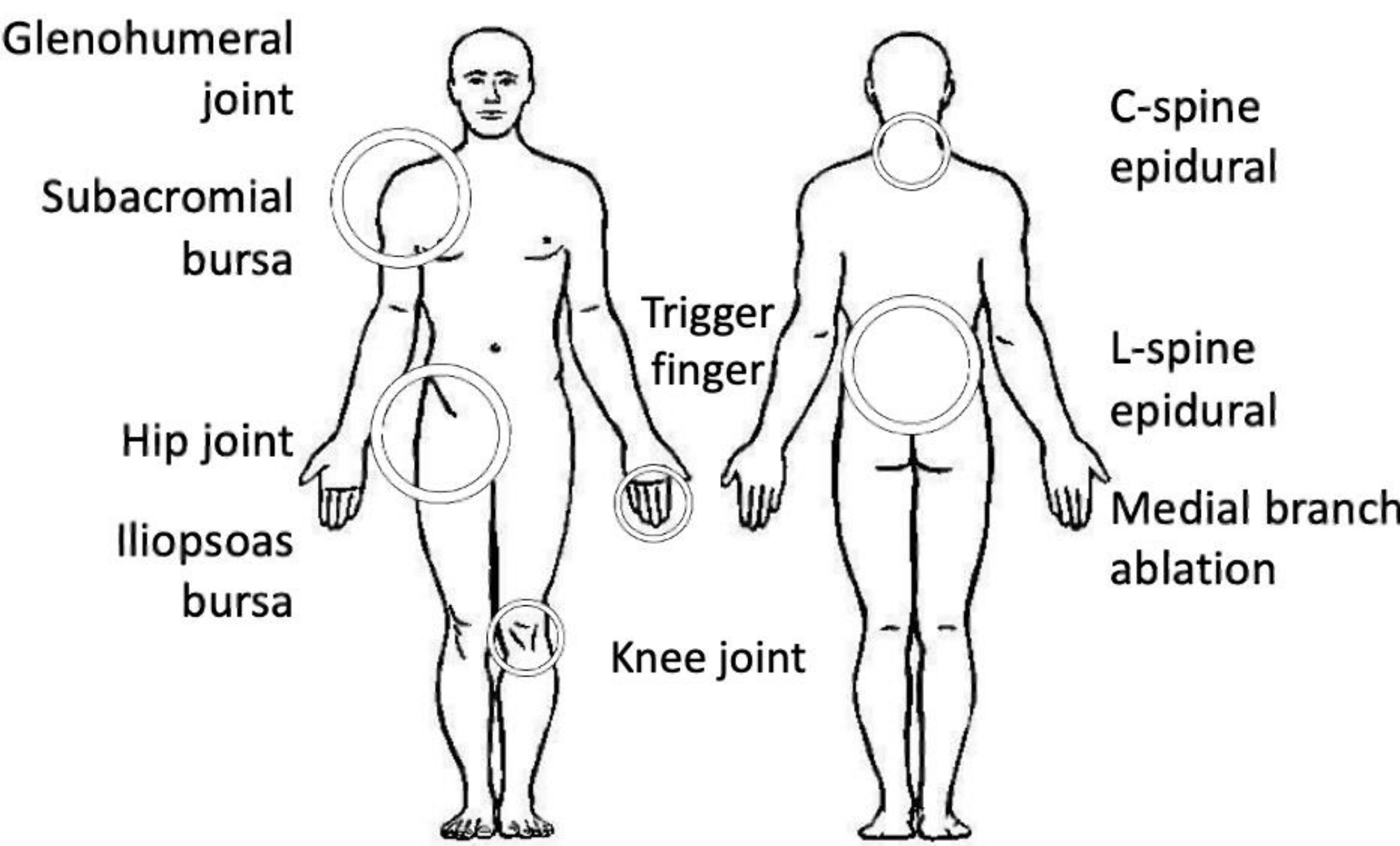


TABLE 2

Patient	Procedure	Diagnosis	ALSFRS-R	Efficacy	Adverse Event
1	USG hip injection	Hip OA	29	Good, repeated x6	None
2	FG lumbar epidural	Spinal stenosis with neurogenic claudication	43	75-100%	None
	FG medial branch ablation	Lumbar spondylosis and axial low back pain	43	Limited, short-term relief	None
	FG cervical epidural	C6 radiculopathy	38	Good, repeated x1	None
3	USG hip injection	Iliopsoas tendinopathy	37	100%, repeated x2	None
4	USG knee injection	Knee OA	39	Good	Hypertension
5	FG GHJ injection	Shoulder subluxation	37	Good	None
6	AG GHJ injection	Adhesive capsulitis	23	Good	None
	AG subacromial injection	Subacromial bursitis	23	Good	None
7	FG subacromial injection	Rotator cuff tendonitis	43	Good	None
8	USG GHJ injection	GHJ OA	33	Good, repeated x1	None
9	USG peritendon injection	Trigger finger	21	Good	None
10	USG GHJ injection	GHJ OA	35	Good, repeated x1	None
11	FG lumbar epidural	L5 radiculopathy	41	Good	None

USG: ultrasound guided; FG: fluoroscopy guided; AG: anatomy/landmark guided; GHJ: glenohumeral joint; OA: osteoarthritis

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