# Spinal Analgesic Drug Delivery for Ehlers-Danlos Hypermobility Type Chronic Pain Treatment: A Case Report

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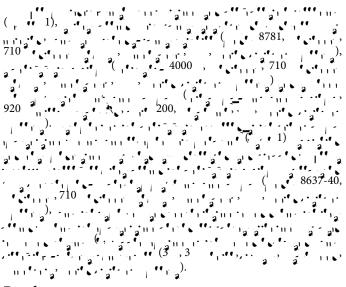
# Abstract

Study background: Chronic pain in patients with Ehlers-Danlos hypermobility type can be a severe, debilitating

## Introduction

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# **Materials and Methods**



## Results

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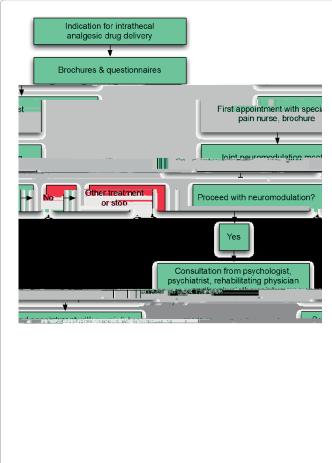
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Day	Morphine dose (mg/day)	Flow rate (mL/day)	NRS	Fentanyl dose (µg/h)
0	0.24	0.12	8	25
1	0.48	0.24	5	25
2	0.72	0.36	5	12
3	0.72	0.36	5	0
4	0.72	0.36	3	0
7	0.72	0.36	3	0
10	0.72	0.36	3	0
14	0.72	0.36	5	0
17	0.72	0.36	3	0

 Table 1: Spinal morphine 2 mg/mL titration scheme during the trial period (NRS = verbal Numerical Rating Scale for pain).

Follow-up	Morphine dose (mg/day)	Flow rate cm0	0m631 (USQ qi (00i (041)6	5 44 0

Figure 1: Flowchart for spinal (intrathecal) analgesic drug delivery.

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# Discussion

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Questionnaire	Baseline Results	3 month results	6 month results	1 year results
HADS				
Depression	12	6	9	7
Anxiety	8	5	5	4
RAND-36				
Physical functioning	15	50	35	30
Role-health	0	50	0	100
Role-emo	33.3	100	33.3	100
Energy/fatigue	15	45	30	30
Emotional	56	76	60	72
Social	37.5	62.5	50	62.5
Pain	22.5	67.5	35	67.5
General	30	35	35	35
Overall	25	100	50	75
PCS				
Rumination	7	2	6	3
Magnifcation	2	1	0	1
Helplessness	7	4	7	3
Overall	16	7	13	7
CPAQ				
Activities engagement	31			35
Pain willingness	33			27
4DSQ				
Distress	14			4
Depression	3			1
Anxiety	0			3
Somatisation	16			11
ODI	52			48
TSK	46			75
PCI				
Pain transformation	11			9
Distraction	12			11
Reducing demands	5			9
Retreating	18			14
Worrying	29			17
Resting	12			11

Table 3: Baseline - and follow-up results from questionnaires.(HADS = Hospital Anxiety and Depression Scale; RAND-36 = RAND 36 item health survery, almost identical to the Medical Outcome Study (MOS) Short Form-36 (SF-36); PCS = Pain Catastrophizing Scale; CPAQ = Chronic Pain Acceptance Questionnaire; 4DSQ = Four Dimensional Symptom Questionnaire; ODI = Oswestry Disability Index; TSK = Tampa Scale for Kinesiophobia; PCI = PainCoping Inventory).

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## References

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