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Lacosamide as conversion to monotherapy in older adults with epilepsy: a retrospective study

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Purpose

Although epilepsy represents the third most common neurological condition in elderly, older patients are frequently excluded from clinical trials. Lacosamide (LCM) has been authorized as monotherapy for partial-onset seizures in adults in the US, but not yet in the EU. The efficacy of LCM as conversion to monotherapy was established in recent studies[1,2] but its effects in elderly remain largely unknown. This study aims at assessing efficacy and tolerability of LCM as conversion to monotherapy over 12 months in older patients.

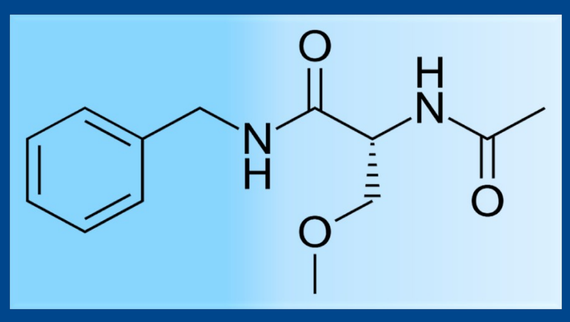
Methods

A retrospective chart review of patients aged ≥ 65 years suffering from partial onset seizures with or without secondary generalization, who were treated with LCM as conversion monotherapy was performed.

Data regarding demographics, seizure type and etiology, LCM dose, number of lifetime AEDs, previous AEDs prior to LCM monotherapy, seizure frequency, seizure free percentage at 12 months follow-up and comorbidities were reported.

Lacosamide

Modulates voltage-gated sodium channels by enhancing their slow inactivation



Fast absorption rate
No relevant protein binding
No cytochrome P450 interactions
13-hour half-life allows twice-daily dosing
No clinically significant drug–drug interaction
Both lacosamide and its metabolites are excreted in urine

Results

In this retrospective study 19 patients (9 males, 10 females, mean age 75.53±7.26 y.o., range 65-89; age at epilepsy onset 70.26±7.69 y.o.) were enrolled. LCM was prescribed to all patients as first add-on with a mean dose of 200±79.93 mg/d. Mean number of lifetime AEDs was 1.63±1.1. All patients had at least two comorbidities on chronic treatment. Reason for introducing LCM were inadequate seizure control, side effects that required a changed of AEDs treatment or both.

Median monthly seizure frequency reduced from 4.82±8.44 to 0.18±0.37 (p<.01) and 13 patients remained seizure free at 12 months follow-up with good tolerability.

Patients No, sex, age, y	Age at epilepsy onset, Y	Duration of epilepsy, n	Seizure type	Etiology	MRI	Lifetime AEDs, n	Previous AED (mg/day) prior to LCM monotherapy	Seizure frequency prior to LCM	LCM dose mg/day	Seizure frequency on LCM Monotherapy	Follow-up, months	Comorbidities
1. M, 80	78	2	CP	Unknown	leukoaraiosis	2	LEV 1500	monthly	200	seizure free	18	HT, O, OSA
2. M, 89	75	14	CP SG	Unknown	leukoaraiosis	2	LEV 1000	monthly	200	sporadic	18	HT, PPM, AFib, ACs, COPD
3. M, 66	65	1	CP SG	Cryptogenic	N	2	PB 100	daily	200	seizure free	12	HT, DM, D, HLD, BPH
4. M, 77	73	4	SP CP	Unknown	leukoaraiosis	2	LEV 1000	weekly	200	seizure free	12	HT, G, HLD, OSA
5.M, 75	74	1	CP	Unknown	leukoaraiosis	2	CBZ 600	monthly	200	seizure free	18	IPB HT, DM, HLD, OSA
6. M, 79	71	8	CP	Unknown	leukoaraiosis	2	LEV 1000	monthly	300	seizure free	15	HT, HLD, CAD, OCD, OSA
7. M, 71	70	1	SG	Symptomatic	left vascular injury	2	LEV 1000	sporadic	200	seizure free	12	HT, HLD
8. M, 77	67	10	CP	Symptomatic	Fhar's syndrome	3	GBP 600	sporadic	100	once	12	HT, CKD, D
9. M, 66	62	4	CP SG	Unknown	leukoaraiosis	4	CBZ 600	weekly	400	seizure free	24	HT, COPD
10. F, 75	71	4	CP SG	Unknown	leukoaraiosis	2	LTG 100	monthly	200	seizure free	12	HT, G
11. F, 66	62	4	SP CP	Symptomatic	right temporal venous malformation	2	CZP 4	monthly	100	seizure free	18	G, H
12. F, 71	65	6	SP CP SG	Unknown	leukoaraiosis	3	CBZ 600	monthly	350	monthly	20	HT, G
13. F, 79	78	1	CP	Symptomatic	Right temporal-parietal vascular injury	2	PB 100	monthly	150	seizure free	12	HT, OSA, D, CKD
14. F, 88	83	5	CP SP	Unknown	leukoaraiosis	2	CBZ 600	monthly	200	seizure free	12	D, G, MCI
15. F, 85	78	7	CP	Symptomatic	right frontal meningioma	3	PHT 250	sporadic	200	seizure free	24	HLD, COPD
16.F, 77	73	4	CP	unknown	leukoaraiosis	3	VPA300	monthly	100	sporadic	18	HT, HLD
17. F, 66	56	10	SP CP SG	Cryptogenic	N	5	PHT 200	daily	200	weekly	18	HT, D
18. F, 66	56	10	SP CP	Symptomatic	left fronto-temporal vascular injury	4	CBZ 800	monthly	200	monthly	18	OSA, HT, DM, UT, D
19. F, 82	78	4	SP CP	Cryptogenic	N	2	CBZ 400	weekly	100	seizure free	24	MCI, ACs, G

SP, simple partial seizure; CP, complex partial seizures; SG, secondarily generalized partial seizures;lifetimeAEDs, including LCM; OSA, obstructive sleep apnoea; HT, hypertension; CKD, chronic kidney disease; DM, diabetes mellitus; O, Obesity; PM, pacemaker, AFib, atrial fibrillation; ACs, oral anticolagulants; G, gastritis, UT, underactive thyroid; D, depressive disorder; COPD, Chronic obstructive pulmonary disease, HLD, Hyperlipidemia; CAD, coronary artery disease; OCD, obsessive-compulsive disorder; BPH, benign prostatic hyperplasia; MCI, mild cognitive impairment.

Conclusions

Epilepsy management in elderly is often challenging. In this retrospective real-life study LCM efficacy and tolerability was favorable even at low doses in older patients and seizure freedom was obtained in 68% of patients at 12 months follow-up. Considering the high rate of comorbidities and the risk of drug-drug interactions, LCM monotherapy may be a valuable option for elderly patients with partial epilepsy due to its favorable pharmacokinetics and safety profile.

References

[1] Wechsler RT et al. Conversion to lacosamide monotherapy in the treatment of focal epilepsy: results from a historical-controlled, multicenter, double-blind study, Epilepsia. 2014 Jul;55(7):1088-98

[2] Lattanzi S et al. Lacosamide monotherapy for partial onset seizures. Seizure. 2015 Apr;27:71-4