

Beyond surgery: a new scenario in drug-resistant epilepsy?

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Cenobamate is a third-generation oral antiepileptic drug approved for the treatment of focal seizures with and without secondary tonic-clonic generalization in adults with epilepsy not controlled by at least two antiepileptic drugs. A real-world study in adult patients treated with cenobamate demonstrated the drug's efficacy in reducing seizures even in subjects who, despite previous epilepsy surgery, were not completely seizure-free. ¹

The aim of this case series is to evaluate the efficacy and tolerability of cenobamate in patients with drug-resistant epilepsy not controlled by surgery.

A retrospective data collection of patients treated with cenobamate was performed, based on clinical documentation. We identified four patients treated with cenobamate who previously undergone epilepsy surgery (2 lesionectomies and 2 corticotomies), with at least one year of follow-up.

All patients reached the 200 mg dose and were responders in terms of both seizure frequency and severity.

None experienced adverse events that required discontinuation of treatment.

Finally, the pharmacological burden of concomitant anti-seizure medications could be reduced.

Our case series highlights the therapeutic role of cenobamate in patients with drug-resistant epilepsy despite previous epilepsy surgery and supports the rationale for further studies on larger populations.

PATIENT DESCRIPTION

Patient	Sex	Year of birth	Year of epilepsy onset	Epilepsy	First surgery	Second surgery
1	F	1974	1998	right temporo-occipital focal	corticoectomy 2015	/
2	F	1983	2016	left temporomesial focal	lesionectomy 2017	/
3	F	1973	2001	right frontotemporal focal	lesionectomy 1988	VNS 2015
4	M	1976	1996	right temporal focal	corticoectomy 2006	DBS 2012

FREQUENCY OF EPILEPTIC SEIZURES

Patient	Before CNB	CNB 200 mg	CNB 200 mg after 6 months	CNB 250 mg	CNB 300 mg
1	2-3 in 1 month	2 in 4 months	2 in 6 months	5 in 12 months	follow-up
2	20 in 1 month	25 in 1 month	15 less intense in 1 month	12 less intense in 1 month	/
3	12 in 1 month	5 in 1 month	6 in 1 month	7-8 in 1 month	/
4	30 in 1 month	30 less intense in 1 month	15 less intense in 1 month	15 less intense in 1 month	/

CONCOMITANT ASM

Patient	Before CNB	CNB 200 mg	CNB 200 mg after 6 months	CNB 250 mg	CNB 300 mg
1	ESL, PB 125, PER 4	PB 125, PER 4	PB 125, PER 4	PB 100, PER 4	PB 100, PER 4
2	ZNS 100, CBZ 800	ZNS 100, CBZ 800	ZNS 100, CBZ 800	ZNS 100, CBZ 600	/
3	LCS 400, PB 150	LCS 400, PB 150	LCS 400, PB 100	LCS 400, PB 75	/
4	TPM 400, ESL 1200, PER 8	TPM 400, ESL 400, PER 8	TPM 400, ESL 400, PER 8	TPM 400, ESL 400, PER 8	/

LEGEND

ASM ANTI SEIZURE MEDICATIONS, CBZ CARBAMAZEPINE, CNB CENOBAMATE, DBS DEEP BRAIN STIMULATION, ESL ESILICARBAZEPINE, PB PHENOBARBITAL, PER PERAMPANEL, TPM TOPIRAMATE, VNS VAGAL NERVE STIMULATION, ZNS ZONISAMIDE.

Bibliography

¹ Peña-Ceballos J, Moloney PB, Munteanu T, et al. Adjunctive cenobamate in highly active and ultra-refractory focal epilepsy: A "real-world" retrospective study. *Epilepsia*. 2023;64(5):1225-1235. doi:10.1111/epi.17549



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