

## COST EFFECTIVENESS OF SODIUM OXYBATE IN TREATMENT OF CATAPLEXY IN PATIENTS WITH NARCOLEPY IN TURKEY

Mehtap Tatar<sup>1</sup>, Esin Tuna<sup>2</sup>, Berna Çağlayan<sup>3</sup>, Nisa Sarıca<sup>3</sup>, Ayça Firidin<sup>3</sup>

<sup>1</sup>Hacettepe University, Faculty of Economics and Administrative Sciences, <sup>2</sup>Polar Health Economics and Policy, <sup>3</sup>UCB Pharma

### BACKGROUND AND AIM

Cataplexy is a frequently observed symptom of narcolepsy that adversely affects the social, emotional and physical health of the patients. Narcolepsy is a rare disease with low prevalence differing among countries and ethnic origins ranging from 2.1 in 10.000 to 4.7 in 10.000. Currently narcolepsy is treated mainly with antidepressants but as their success rate is very low, the unmet need in this field is considerable. Sodium Oxybate is a novel treatment and is the first product developed to treat cataplexy in patients with narcolepsy. This study aims at providing evidence about the cost effectiveness of sodium oxybate in Turkey.

### METHODS

A simple decision model was developed to estimate the cost effectiveness. The clinical data was obtained from the clinical trials of the product. The clinical study results revealed that the annual number of cataplexy attacks prevented with placebo was 671, whereas the figure was 1,845 with sodium oxybate. As the Turkish guidelines for cost effectiveness analysis doesn't allow using QALY data, only the number of prevented cataplexy could be used as the primary endpoint. The study was undertaken from the payer's perspective. Only the cost of Sodium Oxybate was used in the cost side of the formula and all other treatment costs were assumed to be same for all patients.

### RESULTS

The cost per cataplexy attack prevented was found as 17.12 TL. As the incremental cataplexy attacks prevented was 1,174 annually, the total cost per prevented cataplexy attacks was estimated as 20,098 TL (Table 1). Although Turkey doesn't have an explicit threshold to be used in cost effectiveness decisions, this figure is acceptable given the fact that narcolepsy is a rare disease and there is a huge unmet need.

**Table 1:** Incremental Cost Effectiveness Ratio per Prevented Cataplexy Attack

	Placebo	Sodium Oxybate
Cost (TL)	0	20,098.8
Annual prevented cataplexy attack	671	1,845
Incremental cost (TL)	.....	20,098.8
Incremental Annual prevented cataplexy attack	.....	1,174
ICER	.....	17.12

### CONCLUSIONS

Narcolepsy as a rare disease can seriously affect the quality of life of patients. Currently there is no cure of the disease and its most important symptom, cataplexy. Sodium Oxybate is a new and novel treatment to treat cataplexy and provides an opportunity to improve the quality of the patients. The ICER per prevented cataplexy attack is at an acceptable level for the Turkish health care system.

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