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Topiramate for essential tremor [Data only. When citing this record quote "Cochrane Database of Systematic Reviews 2017, Issue 4".]

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Review first published: Issue TBD, TBD

Protocol first published: N/A

Abstract

Background

Objectives

Search methods

Selection criteria

Data collection and analysis

Main results

Authors' conclusions

Plain language summary

Use of topiramate for the treatment of essential tremor

Review question

The authors of this review tried to assess the effectiveness and safety of topiramate in people with essential tremor.

Background

Essential tremor is a type of uncontrollable shaking or trembling of parts of the body. Although it is not harmful in terms of its effect on life expectancy, it generally gets worse and may be disabling. Treatment is usually with medicines (called propranolol and primidone), which may not work in a quarter to a half of people with essential tremor. Some specialists have suggested that another medicine, topiramate, could be useful for treating the condition.

Study characteristics

We searched medical databases for studies of topiramate compared with placebo (a pretend tablet) or any other medicine in adults with essential tremor. We found three studies comparing topiramate versus placebo, involving 309 participants with moderate to severe essential tremor.

Key results

The effect of topiramate on daily activities, risk of stopping treatment and side effects was uncertain because the quality of evidence was very low to low.

Quality of evidence

We only found a few studies that had problems with their methods so we could not make firm conclusions about how well topiramate works and if it has side effects.

Background

Description of the condition

Description of the intervention

How the intervention might work

Why it is important to do this review

Objectives

Methods

Criteria for considering studies for this review

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Types of interventions

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Assessment of reporting biases

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Sensitivity analysis

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Description of studies

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Risk of bias in included studies
Allocation
Blinding
Incomplete outcome data
Selective reporting
Other potential sources of bias
Effects of interventions
Discussion
Summary of main results
Overall completeness and applicability of evidence
Quality of the evidence
Potential biases in the review process
Agreements and disagreements with other studies or reviews
Authors' conclusions
Implications for practice
Implications for research
Acknowledgements
Data and analyses
Comparison 1
Topiramate versus placebo/open control

Included studies

O ut					
c o m e or s u b gr o u p tit	No. of studies	No. of partici pants	Statistical m ethod	Effect size	
le 1.1 F u n ctio n al di s a biti y c o m p o n e nt re la ted to tr e m or			Mean Differe nce (IV, Fixe d, 95% CI)	Subtotals only	
or 1.1.1 ChangeinTRS subscaleBscore		208	Mean Differe nce (IV, Fixe d, 95% CI)	-5.40 [-8.42, -2.38]	
or e 1. 1. 2 C h a n g	1		Mean Differe nce (IV, Fixe d, 95% CI)	-5.70 [-8.74, -2.66]	

O ut to common t	No. of partici pants	Statistical m ethod	Effect size	
gr o u u o citte e e e e e e e e e e e e e e e e e e				
e de la companya de l	273	Mean Differe nce (IV, Fixe d, 95% CI)	-8.91 [-10.50, -7.33]	
	285		Subtotals only 0.18 [0.02, 1.53]	
. 2 . V t t t t t t t t t t t t t		Hisk Hatio (M-H, Fixed, 95% CI)	υ. 18 [U.UZ, 1.53]	

O ut c o m e or s u b gr o u p tit le a	No of atudios	No. of partici pants	Statistical m ethod	Effect size	
c <u>y</u> 1. 2. 2 W it h dr a w al s: A E s 1.		285	Risk Ratio (M-H, Fixed, 95% CI)	3.17 [1.79, 5.63]	
2.3 W it h dr a w al s: ot h ere a s o n	2	285	Risk Ratio (M-H, Fixed, 95% CI)	0.96 [0.45, 2.05]	
s 1.2.4 W it h dr a w al s: to ta	2	285	Risk Ratio (M-H, Fixed, 95% CI)	1.78 [1.23, 2.60]	

Contributions of authors Declarations of interest Sources of support

Internal sources

· No sources of support provided

External sources

• No sources of support provided

Differences between protocol and review

Notes

Characteristics of studies

Characteristics of included studies [ordered by study ID]

Study characteristics		
Methods		
Participants		
Interventions		
Outcomes		
Notes		
110100	i	
Connor 2008		
C4444	1	
Study characteristics Methods		
Participants		
Interventions		
Outcomes		
Notes		
Ondo 2006		
	1	
Study characteristics		
Methods		
Participants		
Interventions		
Outcomes		
Notes		

References

References to studies included in this review

Carrasco Vargas 2011 {published data only}

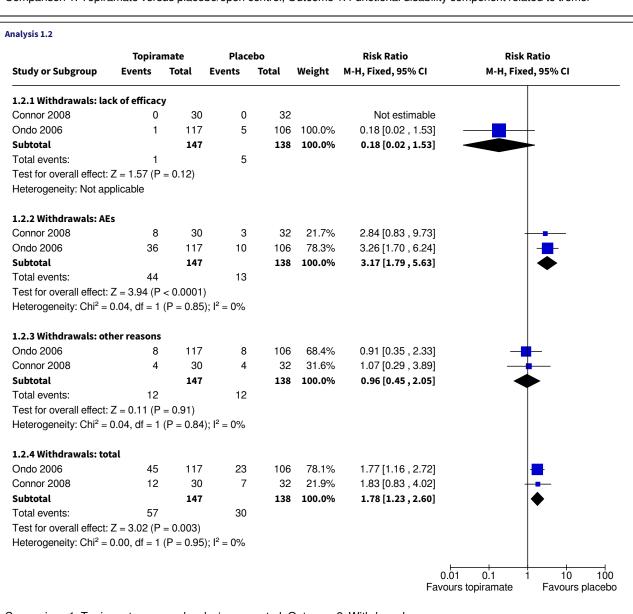
Connor 2008 (published data only)

Ondo 2006 (published data only)

Analysis 1.1			

	То	piramate		F	Placebo			Mean Difference	Mean Differ	ence
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI	IV, Fixed, 95	% CI
1.1.1 Change in TRS subs	cale B score	,								
Ondo 2006	-10.3	12.6	108	-4.9	9.5	100	100.0%	-5.40 [-8.42 , -2.38]		
Subtotal			108			100	100.0%	-5.40 [-8.42, -2.38]	•	
Test for overall effect: Z =	3.51 (P = 0	.0005)							'	
Heterogeneity: Not applic	able									
1.1.2 Change in TRS subs	cale C score									
Ondo 2006	-9.4	13.3	108	-3.7	8.8	100	100.0%	-5.70 [-8.74 , -2.66]		
Subtotal			108			100	100.0%	-5.70 [-8.74, -2.66]	•	
Test for overall effect: Z =	3.67 (P = 0	.0002)							'	
Heterogeneity: Not applic	able									
1.1.3 Change in TRS total	score									
Carrasco Vargas 2011	-15.7	4.5	12	-0.2	1.6	12	34.4%	-15.50 [-18.20 , -12.80]	•	
Connor 2008	-8.6	6.6	17	-2	4.7	24	18.8%	-6.60 [-10.26 , -2.94]	-	
Ondo 2006	-10.8	9.5	108	-5.8	7.5	100	46.8%	-5.00 [-7.32 , -2.68]	•	
Subtotal			137			136	100.0%	-8.91 [-10.50 , -7.33]	•	
Test for overall effect: Z =	11.02 (P <	0.00001)					• •	'	
Heterogeneity: Chi ² = 35.	•			10/						

Comparison 1: Topiramate versus placebo/open control, Outcome 1: Functional disability component related to tremor



Comparison 1: Topiramate versus placebo/open control, Outcome 2: Withdrawals