Amitriptyline

Section: 24. Medicines for mental and behavioural disorders > 24.2. Medicines for mood disorders > 24.2.1. Medicines for depressive disorders

ATC codes: N06AA09

Indication	Depressive disorders ICD11 code: 6A7Z
INN	Amitriptyline
Medicine type	Chemical agent
List type	Core
Formulations	**Oral > Solid:** 25 mg ; 75 mg
EML status history	First added in 1977 (TRS 615) Changed in 2013 (TRS 985) Changed in 2021 (TRS 1035) Changed in 2023 (TRS 1049)
Sex	All
Age	Adolescents and adults
Therapeutic alternatives	The recommendation is for this specific medicine
Patent information	Patents have expired in most jurisdictions Read more about patents.
Wikipedia	Amitriptyline
DrugBank	Amitriptyline

Expert Committee recommendation

The Expert Committee considered that the data were insufficient to support the inclusion of other tricyclic antidepressants as therapeutic alternatives for amitriptyline on the EML for the treatment of depressive disorders. The Committee considered that amitriptyline was the tricyclic antidepressant with the greatest amount of evidence within the class and other tricyclic antidepressants had insufficient evidence or were likely to be inferior to amitriptyline in some relevant areas. The Expert Committee therefore recommended the square box be removed from the current listing for amitriptyline for treatment of depression on the EML.

Background

A square box listing for amitriptyline has been included on the EML for use in depressive disorders since the first list was published in 1977, as the representative medicine for the class of tricyclic antidepressants. In 2021, following the review of square box listings on the EML and EMLc, the Expert Committee requested the therapeutic alternatives for amitriptyline on the EML be reviewed.

Public health relevance

Not applicable.

Benefits

Meta-analyses using standard pairwise comparisons of tricyclic antidepressants against placebo have not been able to identify the best medicines within the class (1). A 2018 systematic review and network meta-analysis evaluated the comparative efficacy of 21 different antidepressant medicines for the treatment of adults with major depressive disorder (2). This review examined data on two tricyclic antidepressants – amitriptyline and clomipramine – and found that both medicines were more effective than placebo for the outcome of reduction in overall depressive symptoms: amitriptyline standardized mean difference (SMD) –0.48, 95% confidence interval (CI) –0.55 to –0.41, and clomipramine SMD –0.33, 95% CI: –0.45 to –0.21. However, the estimate for clomipramine was indirect, with no included studies directly comparing clomipramine with placebo. The only study comparing clomipramine with placebo, randomized only 38 participants and did not include efficacy data suitable for reanalysis.

Harms

As measured by drop-out rate, clomipramine was the only medicine among the 21 included in the above-mentioned review, found to be less acceptable than placebo (odds ratio (OR) 1.30, 95% CI 1.01 to 1.68) (2). In comparison, for amitriptyline, the OR for acceptability was 0.95 (95% CI 0.83 to 1.08).

Cost / cost effectiveness

Not applicable.

WHO guidelines

The 2023 WHO Mental Health Gap Action Programme (mhGAP) guideline for mental, neurological and substance use disorders includes a conditional recommendation for antidepressants (specifically, amitriptyline, citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine or sertraline) to be considered for adults with moderate-to-severe depression (very-low certainty evidence) (3).

Availability

Not applicable.

1. Furukawa T, McGuire H, Barbui C. Low dosage tricyclic antidepressants for depression. Cochrane Database Syst Rev. 2003;2003(3):CD003197.
2. Cipriani A, Furukawa TA, Salanti G, Chaimani A, Atkinson LZ, Ogawa Y, et al. Comparative efficacy and acceptability of 21 antidepressant drugs for the acute treatment of adults with major depressive disorder: a systematic review and network meta-analysis. Lancet. 2018;391(10128):1357–66.
3. Mental Health Gap Action Programme (mhGAP) guideline for mental, neurological and substance use disorders. Third edition. Geneva: World Health Organization; 2023 (https://iris.who.int/handle/10665/374250, accessed 21 November 2023).

