Efficacy and safety for the newer antidepressants in adults

This is an excerpt from the full technical report, which is written in Norwegian.

The excerpt provides the report's main messages in English.

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Norwegian Knowledge Centre for the Health Services summarizes and disseminates evidence concerning the effect of treatments, methods, and interventions in health services, in addition to monitoring health service quality. Our goal is to support good decision making in order to provide patients in Norway with the best possible care. The Centre is organized under The Norwegian Directorate for Health, but is scientifically and professionally independent. The Centre has no authority to develop health policy or responsibility to implement policies.

We would like to thank all contributers for their expertise in this project. Norwegian Knowledge Centre for the Health Services assumes final responsibility for the content of this report.

Norwegian Knowledge Centre for the Health Services
Oslo, June 2007

Key messages

Efficacy and safety for the newer antidepressants in adults

Background Depression is a varied illness, patients may present with symptoms such as lack of initiative, a sense of meaninglessness, depressive thoughts and/or suicidal behaviour. Problems with sleep, lack of appetite, energy, drive, anxiety and concentration are also common. Our understanding of the neurobiological causes of depression is incomplete. Reduced accessibility of monoaminerge neurotransmitters in the central nervous systems is one possible explanation. Several antidepressant drugs are available. SSRI (selective serotonin reuptake inhibitors) and other second generation anti depressants have been increasingly used in recent years.
Antidepressants increase the accessibility of serotonin and/or noradrenalin, either by inhibiting the reuptake or inhibiting the decomposition. This does not seem to explain the effect.

Methods We have systematically reviewed the literature for effect and safety in head-to-head studies of SSRI and other second generation antidepressants used in adults with depression. The literature was identified by a systematic search in international, electronic databases. We also received literature from the pharmaceutical industry. We assessed and summarised studies that fulfilled our predetermined criteria.

Results 23 studies are included in the report. The 23 studies deal with 12 different comparisons out of 66 possible. Nine different antidepressants were compared. The documentation is of low quality for most of the comparisons. We did not find any differences in effect and safety in the head-to-head studies we analyzed with the exception of: Escitalopram was significantly more effective (response and remission rate) than citalopram. Loss to follow up was significantly lower for escitalopram than for citalopram. Citalopram had a significantly lower adverse event rate than venlafaxin. Mirtazapin was significantly more effective (remission rate) than paroxetin. Loss to follow up due to side effects was significantly lower for fluoksetin than for venlafaxin.
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Conclusion We have included 12 different head-to head comparisons out of 66 possible. Nine different antidepressants were involved in the comparisons. We did not find any significant differences in effect and safety between the antidepressants except for the comparisons escitalopram versus citalopram, citalopram versus venlafaxin and mirtazapin versus paroxetin where we found significant differences for some of the outcomes. The conclusions are based on documentation of medium or low quality.

Executive summary

Efficacy and safety for the newer antidepressants in adults

BACKGROUND

Background Our understanding of the neurobiological causes of depression is incomplete. Reduced accessibility of monoaminerge neurotransmitters in the central nervous systems is one possible explanation. Several antidepressant drugs are available. SSRI (selective serotonin reuptake inhibitors) and other second generation anti depressants have been increasingly used in recent years.

OBJECTIVE

The report is a systematic review of the literature that compares the effect and safety between the different SSRI and other second generation antidepressants.

METHODS

We have systematically reviewed the literature for effect and safety in head-to-head studies of SSRI and other second generation antidepressants used in adults with depression. The literature was identified by a systematic search in Medline, Embase, PsychINFO, Cochrane Library and the CRD databases. We also received literature from the pharmaceutical industry. Relevance and quality was assessed according to our handbook. We used GRADE to assess the documentation for each of the outcomes. The results are presented in tables and in a descriptive summary. Meta-analyses have also been carried out.

RESULTS

23 studies are included in the report. The 23 studies deal with 12 different comparisons out of 66 possible. Nine different antidepressants were compared. We did not find any studies that fulfilled our inclusion criteria for mianserin, reboxetin and duloxetin, table A.

Table A Antidepressants in head-to-head studies of effect and safety

Anti-depressant	Fluoxetin	Citalopram	Paroxetin	Sertralin	Fluvoksamin	Escitalopram	Moklobemid	Mianserin	Mirtazapin	Venlafaxin	Reboxetin	Duloxetin
Fluoxetin												
Citalopram	1											
Paroxetin	3											
Sertralin												
Fluvoxamin	1											
Escitalopram		4		1								
Moklobemid	1											
Mianserin												
Mirtazapin			1									
Venlafaxin	5	1	1	3		1						
Reboxetin												
Duloxetin												

The results are reported at the end of each study.

We did not find any significant differences regarading selected outcomes for the comparisons paroxetin versus fluoxetin; venlafaxin versus sertralin; citalopram versus fluoxetin; escitalopram versus sertralin; escitalopram versus venlafaxin; fluvoxamin versus fluoxetin; moclobemid versus fluoxetin; and venlafaxin versus paroxetin.

Escitalopram was significantly more effective (response and remission rate) than citalopram. Loss to follow up was significantly lower for escitalopram than for citalopram.

Citalopram had a significantly lower adverse event rate than venlafaxin.

Mirtazapin was significantly more effective (remission rate) than paroxetin.

Loss to follow up due to side effects was significantly lower for fluoksetin than for venlafaxin.

The documentation is however of low quality for most of the comparisons. Only the comparisons between venlafaxin versus fluoxetin and escitalopram versus citalopram together with the outcomes response rate and drop out due to adverse events for venlafaxin versus sertralin are based on documentation of medium quality.

CONCLUSION

We have included 12 different head-to head comparisons out of 66 possible. Nine different antidepressants are involved in the comparisons.

We did not find any significant differences in effect and safety between the antidepressants, with a few exceptions: Escitalopram versus citalopram, citalopram versus venlafaxin and mirtazapin versus paroxetin showed significant differences for some of the outcomes.

The conclusions are based on documentation of medium or low quality.

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