

Fluvoxamine reduced symptoms of social phobia, separation anxiety disorder, and generalised anxiety disorder in children

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The Research Unit on Pediatric Psychopharmacology Anxiety Study Group. **Fluvoxamine for the treatment of anxiety disorders in children and adolescents.** *N Engl J Med* 2001 Apr 26; 344:1279–85.

QUESTION: In children with social phobia, separation anxiety disorder, or generalised anxiety disorder, how effective is fluvoxamine, compared with placebo, in reducing anxiety?

Design

8 week randomised {allocation concealed*}†, blinded (clinicians and patients)*, controlled trial.

Setting

5 medical centres in the US.

Patients

128 children who were 6–17 years of age (74% 6–12 y, 51% boys) and met the *DSM-IV* criteria for social phobia, separation anxiety disorder, or generalised disorder. Other inclusion criteria were clinically important symptoms of anxiety according to the Pediatric Anxiety Rating Scale (PARS) and clinically important impairment according to the Children's Global Assessment Scale (CGAS). Exclusion criteria were current treatment with a psychoactive substance, major depression, Tourette's syndrome, obsessive compulsive disorder, post-traumatic stress disorder, conduct disorder, panic disorder, mania, psychosis, pervasive developmental disorder, suicidal ideation, intelligence quotient <70, previous treatment with a selective serotonin reuptake inhibitor, or attention deficit disorder requiring drug treatment. 104 children (81%) completed the study.

Intervention

Patients were allocated to fluvoxamine, maximum 300 mg/day in adolescents and 250 mg/day in children (n = 63) or placebo (n = 65).

Main outcome measures

Change in score on the PARS (range 0–25; 10 = mild 20 = high levels of anxiety) and Clinical Global Impressions-Improvement scale (CGI-I) (8 point scale; 3 = improved, 2 = much improved, and 1 = symptom free).

Main results

Analysis was by intention to treat. Patients who received fluvoxamine showed greater improvement on the PARS than patients who received placebo. Differences between the groups were detectable at 3 weeks and increased through week 6 with no appreciable change to week 8 ($p < 0.001$) (table). Fluvoxamine group patients also showed greater improvement than placebo group patients on the CGI-I scale ($p < 0.001$) (table). Abdominal discomfort was the only significant adverse effect that occurred more frequently in the fluvoxamine group (49% v 28%, $p = 0.02$).

Conclusion

In children with social phobia, separation anxiety disorder, or generalized anxiety disorder, fluvoxamine reduced anxiety and was well tolerated.

*See glossary.

†Information provided by author.

Fluvoxamine v placebo for social phobia, separation anxiety disorder, or generalized anxiety disorder in children†.

Outcomes at 8 weeks	Fluvoxamine	Placebo	Mean difference (95% CI)	
Pediatric Anxiety Rating Scale score	9.0	15.9	6.9 (4.7 to 9.1)	
			RBI (CI)	NNT (CI)
Proportion of patients with CGI-I scores <4	76%	29%	161% (78 to 298)	3 (2 to 4)

†Abbreviations defined in glossary; mean difference, RBI, NNT, and CI calculated from data in article.

COMMENTARY

Treatment research specific to the young is needed because experience has shown that results from treatment studies in adults cannot necessarily be generalised to children. The efficacy of cognitive behaviour treatment (CBT) for anxiety disorders in children and adolescents has been shown in randomised controlled trials.¹ In contrast, pharmacotherapy studies involving tricyclic antidepressant drugs and benzodiazepines have been equivocal.²

In the study by the Research Unit on Pediatric Psychopharmacology Anxiety Study Group, fluvoxamine was superior to placebo in reducing anxiety symptoms in children aged 6–17 years. To maintain perspective, the mean anxiety scores for the active treatment group remained within the range associated with mild but clinically significant symptoms. Participants were deemed “responders” if they had shown improvement, even though symptoms may not have remitted. The integrity of the blinding was not reported. Treatment status may have been apparent to clinician raters and contributed to rater bias because of the presence of abdominal discomfort and motor restlessness in the treated group. Self report measures used to determine outcome were not reported. It is conceivable, therefore, that although clinicians perceived improvement in the treated group, the children themselves did not feel much better. This can be important when considering motivation to persist with treatment.

As acknowledged by the investigators, the study does not tell us whether fluvoxamine is superior or inferior to CBT. A comparative trial is required to resolve this issue. A conservative interpretation of the data is that treatment with fluvoxamine reduces anxiety symptoms in children, but does not necessarily result in remission. More robust evidence exists to support the use of CBT for anxiety disorders in children and adolescents.

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- 1 Silverman WK, Berman SL. Psychosocial interventions for anxiety disorders in children: status and future directions. In: Silverman WK, Treffers PD, editors. *Anxiety disorders in children and adolescents: research, assessment, and intervention*. Cambridge: Cambridge University Press, 2001:313–34.
- 2 Bernstein GA, Borchardt CM, Perwien AR. Anxiety disorders in children and adolescents: a review of the past 10 years. *J Am Acad Child Adolesc Psychiatry* 1996;35:1110–9.