

Ginkgo Biloba for Antidepressant-Induced Sexual Dysfunction

Alan J. Cohen M.D.

University of California at San Francisco, San Francisco, California,
USA

Barbara Bartlik

New York Hospital-Cornell Medical Center, New York, New York, USA

In an open trial ginkgo biloba, an extract derived from the leaf of the Chinese ginkgo tree and noted for its cerebral enhancing effects, was found to be 84 % effective in treating antidepressant-induced sexual dysfunction predominately caused by selective serotonin reuptake inhibitors (SSRIs, N = 63). Women (n = 33) were more responsive to the sexually enhancing effects of ginkgo biloba than men (N = 30), with relative success rates of 91% versus 76%. Ginkgo biloba generally had a positive effect on all 4 phases of the sexual response cycle: desire, excitement (erection and lubrication), orgasm; and resolution (afterglow). This study originated from the observation that a geriatric patient on ginkgo biloba for memory enhancement noted improved erections. Patients exhibited sexual dysfunction secondary to a variety of antidepressant medications including selective serotonin reuptake inhibitor (SSRIs), serotonin and nonrepinephrine reuptake inhibitor (SNRIs) monoamine oxidase inhibitor (MAOIs), and tricyclics. Dosages of ginkgo biloba extract ranged from 60 mg qd to 120 mg bid (average = 209 mg/d). The common side effects were gastrointestinal disturbances, headache, and general central nervous system activation. The article includes a discussion of presumed pharmacologic mechanisms, including effects on platelet activating factor, prostaglandins, peripheral vasodilatation, and central serotonin and norepinephrine receptor factor modulation.

See original reference delayed or inhibited orgasm (54%), and ejaculatory failure. Attempts had been made to alleviate sexual dysfunction through other pharmacologic means, including the use of cyproheptadine, yohimbine, amanta-dine, buspirone, or antidepressant dose reduction, without success. Sixty -three consecutive patients were prescribed ginkgo biloba extract, 40 or 60 mg capsules to be taken twice a day, titrated up to 120 mg bid, as tolerated. The average dose was 207 mg per day. Patients remained on their antidepressant medication. After a 4-week trial period, they were reevaluated for symptoms of sexual dysfunction. Response was determined by clinical interview and self-reporting assessment by the patients.

RESULTS

Ginkgo biloba was found to be 84% effective in alleviating antidepressant-induced sexual dysfunction. Women (n = 33) were more responsive to the sexually enhancing effects of ginkgo biloba than men (n = 30), with relative success rates of 91% versus 76%. Ginkgo biloba appeared to have a positive effect on all four phases of the sexual response cycle; desire, excitement (erection and lubrication), orgasm, and resolution (afterglow). All patients who responded have requested to continue ginkgo biloba and are quite satisfied with the results. No adverse side effects were reported, and it appears to be compatible with antidepressant treatment. In addition, many patients reported spontaneously that they had improved cognitive functioning, mental clarity, and memory. Enhanced energy level was also frequently described. These effects were not systematically studied, however. These additional effects appeared to benefit patients clinically and enhanced patient compliance.

DISCUSSION

Ginkgo biloba, the extract of the leaves of the maidenhair tree, has been used therapeutically in Asia for centuries. It has been recognized by the medical establishment in Germany and France, where it is available by prescription for the treatment of memory impairment and peripheral artery circulatory disturbances. Such extracts are among the most commonly prescribed drugs in Germany and France. In 1989, more prescriptions for ginkgo biloba extract were written than for any other drug, amounting to 5 million prescriptions.

Numerous clinical trials have shown that ginkgo biloba has been effective in treating cerebral insufficiency in geriatric patients. The mechanism of action by which ginkgo biloba is thought to be effective for these conditions appears to be in part through active "ginkgolides" terpenoids and flavinoids that appear to inhibit platelet aggregation, neutrophil degranulation, and the induction of oxygen-free radical production. Ginkgo biloba has been shown to improve cerebral metabolism and protect against hypoxic damage to the brain in laboratory animals. In double-blind, controlled studies, ginkgo biloba was shown to be effective in improving the mental performance of elderly patients. Ginkgo biloba extract resulted in improved reaction time on memory tests in women of reproductive age. It also led to stronger alpha and beta brain wave patterns.

Ginkgo biloba has been reported to be effective in a host of conditions responsive to improved circulation. These included the treatment of hearing problems, visual disturbances, edema, varicose veins, leg ulcers, stroke, and intermittent claudication. Ginkgo extract also increases the binding of acetylcholine to brain receptor sites in animal studies. Reduced acetylcholine binding has been implicated in Alzheimer's disease.

The mechanism of action by which ginkgo biloba reverses antidepressant-induced sexual dysfunction is not yet clear. It may be related to three or more separate actions: (a) enhanced vascular flow to the genitals through inhibition of platelet-activating factor, perhaps similar to the mechanism by which the extract enhances cerebral perfusion; (b) a direct effect of the extract on prostaglandins, which are known to enhance erectile function; and (c) serotonin and norepinephrine receptor-induced effects on the brain, which have yet to be elucidated. The side effects associated with ginkgo's use appear minimal and include stomach and intestinal upset, headache, allergic skin reactions, and potential for increased bruising. Caution should be exercised in patients at risk of hemorrhaging. None of these side effects were clinically significant.

CONCLUSION

Double-blind studies with systematic measurement of sexual function using ginkgo biloba extract are needed to confirm these initial positive results. The potential of ginkgo biloba to aid in the relief of antidepressant-induced sexual problems, which are pervasive, and its apparent safety, make it a useful addition to current remedies for this significant clinical problem.

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