Interferon and treatment for depression

Robert K. Schneider MD
James L. Levenson MD

Revised 5-8-2002 by Robert K. Schneider MD


BACKGROUND:
Depression is the most frequent adverse effect leading to discontinuation of interferon, with suicidal ideation not uncommon. Yet interferons are important in the treatment of hepatitis C, multiple sclerosis, and malignancies. Antidepressants have been reported to be effective in treating interferon-induced depression.

AIM:
To determine whether pretreatment with antidepressants would reduce depressive symptoms following interferon alfa treatment.

METHODS:
Randomized, double-blind, placebo-controlled trial of paroxetine given to patients 2 weeks before initiation of high dose interferon alfa for malignant melanoma, and continued for 12 weeks.

MAIN FINDINGS:
Major depression developed in 11% in the paroxetine group and 45% in the placebo group (relative risk 0.24; 95% CI, 0.08-0.93). Severe depression led to discontinuation of interferon in 5% of the paroxetine group and 35% of the placebo group (relative risk 0.14; 95% CI, 0.05-0.85). Thus, among those in
whom major depression developed in the placebo group, interferon was discontinued in 78%.

CONCLUSIONS:
Pretreatment with paroxetine appears to be effective in reducing the emergence of depression induced by interferon alfa in patients with malignant melanoma. The occurrence of major depression usually results in discontinuation of interferon, but this study shows that antidepressant treatment is a valuable tool to facilitate maintaining interferon therapy.

LIMITATIONS:
Results may not be generalizable to interferon alfa treatment of other diseases (e.g., hepatitis C) or other interferons (e.g., interferon beta). Also, this study utilized pretreatment therapy for depression, the results could differ if the antidepressant was given after symptoms of depression had already appeared.

IMPACT ON INTERNAL MEDICINE:
Depression can be a serious side effect of a number of drugs, e.g., corticosteroids, beta blockers, isotretinoin, and interferon. When it is not possible to substitute an alternative medication, it is appropriate to try treating the drug-induced depression with antidepressants, and in some cases for prevention before administering the drug.