900 mg daily of gabapentin was effective for hot flashes in women with breast cancer

Pandya KJ, Morrow GR, Roscoe JA, et al. **Gabapentin for hot flashes in 420 women with breast cancer: a randomised double-blind placebo-controlled trial.** Lancet. 2005;366:818-24.

Clinical impact ratings: GIM/FP/GP ★★★★★☆☆ Oncology ★★★★★★☆

QUESTION

In women with breast cancer, does gabapentin (a γ-aminobutyric acid analogue) reduce the frequency and severity of hot flashes more than placebo?

METHODS

Design: Randomized placebo-controlled trial.

Allocation: Unclear allocation concealment.*

Blinding: Blinded (clinicians and patients).*

Follow-up period: 8 weeks.

Setting: 18 member sites of the University of Rochester (New York, USA) Community Clinical Oncology Program.

Patients: 420 women ≥ 18 years of age (mean age 55 y) with breast cancer who were having an average ≥ 2 hot flashes daily. 71% of women were taking tamoxifen. Women receiving chemotherapy or taking venlafaxine, clonidine, or anticonvulsants were not eligible, but use of other antidepressants was allowed. Exclusion criteria included pregnancy; breastfeeding; use of steroidal contraception; and recent history of cardiovascular, cerebrovascular, hepatic, or renal problems.

Intervention: Gabapentin, 900 mg (n = 144) or 300 mg (n = 139) daily, or placebo (n = 137), taken orally in 3 divided doses for 8 weeks. Allocation was stratified by center and duration of hot flashes.

Outcomes: Frequency, severity score (scores of 1 [mild], 2 [moderate], 3 [severe], and 4 [very severe] assigned to daily hot flashes and added together), and duration of hot flashes, averaged over 1 week; and side effects.

Patient follow-up: 88% at 4 weeks and 83% at 8 weeks (intention-to-treat analysis).

MAIN RESULTS

At both 4 and 8 weeks, the reduction in frequency and severity of hot flashes was greater with 900 mg of gabapentin than with placebo (Table). The 300-mg dose of gabapentin showed a slight benefit over placebo in decreasing frequency, but not severity, of hot flashes (Table). The decrease in duration of hot flashes and change in severity of side effects were not different among groups.

CONCLUSION

In women with breast cancer, gabapentin at a daily dose of 900 mg was more effective than placebo for treatment of hot flashes.

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*See Glossary.

Gabapentin vs placebo for hot flashes in women with breast cancer at 8 weeks†

Outcomes	Mean percent change from baseline			Difference in change from baseline (95% CI)
	Gabapentin 900 mg	Gabapentin 300 mg	Placebo	
Hot flash daily frequency	–44%	—	–15%	–26% (–37 to –15)
	—	–30%	–15%	–12% (–23 to –1)
Hot flash severity score	–46%	—	–15%	–30% (–44 to –16)
	—	–31%	–15%	–13% (–29 to 2)‡

†CI defined in Glossary.

‡Not significant.

COMMENTARY

The well-done, large clinical trial by Pandya and colleagues concluded that gabapentin, at a dose of 900 mg per day in 3 divided doses, was more effective than placebo in reducing hot flashes in breast cancer survivors. The results of this trial mirror those of a study using the same dose of gabapentin in postmenopausal women who did not have breast cancer (1). These confirmatory results clearly identify that gabapentin moderately reduces hot flashes.

The finding of virtually identical efficacy of gabapentin treatment in women with, versus without, a history of breast cancer is similar to that observed with paroxetine. 2 large trials of paroxetine have been completed in women with (2) and mostly without breast cancer (3). Virtually identical results were reported in both trials. Thus, it is reasonable to conclude that hot flashes are similar in women with and without a history of breast cancer.

Gabapentin can appropriately be added to the list of other neuroactive, nonhormonal agents that can reduce hot flashes. The other agents of this class include clonidine and newer antidepressants. Clonidine mildly reduces hot flashes (about 10% to 15% more than placebo) but associated toxicities limit its use. The newer antidepressants that have been shown to reduce hot flashes, venlafaxine and paroxetine, do so to a degree similar to gabapentin (about a 60% reduction compared with about a 25% reduction with placebo).

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References

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3. **Stearns V, Beebe KL, Iyengar M, Dube E.** Paroxetine controlled release in the treatment of menopausal hot flashes: a randomized controlled trial. JAMA. 2003;289:2827-34.