Anesthetic Injections Into the Stellate Ganglion for the Treatment of Hot Flashes in Women: A Review

Context
Hot flashes are sudden and transient periods of sweating and feeling hot, which may be accompanied by heart palpitations and anxiety. Hot flashes occur in 80% to 90% of post-menopausal women and in 51% to 81% of women with breast cancer. The physiological causes of hot flashes are unclear but seem to involve neurochemical and thermoregulatory disruptions. Therapeutic options for hot flashes include pharmaceutical/hormone replacement therapies, nutraceuticals, and complementary/behavioural therapies such as acupuncture and yoga. A newer treatment option for hot flashes is a surgical therapy called “stellate ganglion block” (SGB).

Technology
SGB is an injection of an anesthetic, such as bupivacaine, to block the stellate ganglion (a collection of nerves in the neck). It is used to treat migraines, atypical facial pain, upper extremity pain, and complex regional pain syndrome. SGB has been proposed as a treatment for hot flashes based on the belief that interruptions of the connections between a stellate ganglion and areas of the central nervous system may reset the body temperature.

Issue
A review of the clinical evidence, cost-effectiveness, and guidelines regarding the use of SGB to treat hot flashes in women will help inform decisions about its use for this purpose.

Methods
A limited literature search was conducted of key resources, and titles and abstracts of the retrieved publications were reviewed. Full-text publications were evaluated for final article selection according to predetermined selection criteria (population, intervention, comparator, outcomes, and study designs).

Key Messages
- SGB may be effective, in the short term, for reducing the frequency and severity of hot flashes in post-menopausal women and in women with breast cancer (based on limited evidence).
- No cost-effectiveness information on SGB for the treatment of hot flashes was found.
- No guidelines on the use of SGB for the treatment of hot flashes were found.

Results
The literature search identified 31 citations, with no additional articles identified from other sources. After screening the abstracts, 14 were deemed potentially relevant and 5 met the criteria for inclusion in this review — 2 randomized controlled trials and 3 observational, open, uncontrolled studies.