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Chronic Pain Abstracts

Contents

Perioperative dexamethasone and chronic postmastectomy pain: a retrospective cohort study

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INTRODUCTION

Chronic postsurgical pain (CPSP) following breast cancer surgery is an unresolved issue, with varying manifestations such as site-specific or referred pain. The mechanisms of CPSP remain elusive. Intriguingly, recent evidence indicates that anti-inflammatory drugs may, paradoxically, exacerbate chronic pain.[1] We evaluate the incidence and severity of CPSP in breast cancer patients who perioperatively received intravenous dexamethasone for the prophylaxis of postoperative nausea and vomiting versus those who did not. While dexamethasone may alleviate acute pain, we hypothesize that it heightens CPSP's risk and severity.

METHODS

After obtaining research ethics board approval, we surveyed by telephone female patients who underwent complex breast surgery by two senior surgeons at a university-affiliated Canadian hospital between February 2018 to June 2023. Patients underwent diverse mastectomy procedures including modified radical, total, nipple-sparing, skin-sparing, and simple mastectomies, often combined with sentinel lymph node biopsies or axillary dissections, performed unilaterally or bilaterally. Additionally, the procedures encompassed breast reconstruction surgeries, frequently following the mastectomy. Subjects were evaluated at least three months postoperatively. Patients were queried regarding the presence of pain and, if applicable, its location (surgical site or other) and severity on a 10-point scale. Data was obtained on age, time since surgery, and dexamethasone dose.

RESULTS

We interviewed 269 patients. Final analysis excluded nine patients for undergoing surgeries elsewhere postinitial breast surgery, and 34 for pre-existing chronic pain diagnoses. One hundred and ninety-seven patients received dexamethasone and 72 did not. The

dexamethasone group had an average age of 57.9 (SD, 14.2) yr, compared to 61.9 (SD, 15.1) yr for the nondexamethasone group. One hundred and six (52.8%) patients in the dexamethasone group had pain compared to 33 (45.8%) in the nondexamethasone group. This difference was not statistically significant. Binominal logistic regression identified no differences between the groups for total pain ($P = 0.35$), pain at the surgical site or elsewhere ($P = 0.17$; $P = 0.67$), and worst pain severity at the surgical site or elsewhere ($P = 0.15$; $P = 0.75$). Age reached statistical significance as a predictor of pain at the surgical site ($P = 0.014$). For each additional year of age, the likelihood of experiencing pain increases by 2.19%.

DISCUSSION

Taking into the account the limitations of this small retrospective analysis, the results of the present survey do not show a statistically significant impact of the perioperative use of dexamethasone on the incidence or severity of chronic pain after complex breast cancer surgery. A larger-scale, high-quality randomized controlled trial will be required to comprehensively assess the effects of perioperative dexamethasone on CPSP.

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Prospective preference assessment for the psilocybin for enhanced analgesia in chronic neuropathic pain trial

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53

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INTRODUCTION

Preliminary evidence suggests the potential for psilocybin, the active component of "magic mushrooms," to alleviate chronic pain.[1–3] Nevertheless, the therapeutic efficacy of psilocybin in chronic neuropathic pain remains understudied. To address this gap in evidence, we propose to conduct the Psilocybin for Enhanced Analgesia in Chronic Neuropathic PAIN (PEACE-PAIN) pilot, randomized, active-placebo controlled trial. Negative perceptions of psilocybin and challenges of participant enrollment may represent barriers to conducting the PEACE-PAIN trial.[4,5] Thus, prior to trial initiation, we conducted a prospective preference assessment (PPA) to examine patient attitudes towards the trial. In this prospective preference assessment (PPA), the objectives were to: 1) determine patients' willingness to participate in the PEACE-PAIN trial; 2) identify areas for improvement in the trial protocol to enhance patient enrollment and acceptability; and 3) explore differences in characteristics between patients who would and would not be willing to participate in the PEACE-PAIN trial.

METHODS

Patients, aged 18 yr and older with chronic neuropathic pain (at least three months in duration), were enrolled in the PPA. The PPA consisted of four sections: 1) a brief, researcher-produced vignette describing the proposed trial; 2) an assessment of the individuals' understanding of the trial; 3) open ended questions assessing attitudes towards the trial (i.e.,

factors that motivate and discourage participation); and 4) patient completed questionnaires. Content analysis was used to inductively and deductively identify factors that would motivate or discourage participation in the proposed trial. Demographics, clinical characteristics, and perceptions of psilocybin were collected to explore differences in characteristics between patients who were willing and unwilling to participate.

RESULTS

A total of 26 patients (mean age, 56.6 [SD, 16.7] yr; 61.5% female] were included in the study. Survey results showed that most participants (76.9%) were willing to participate in the PEACE-PAIN trial. “Willing” participants reported higher prior psychedelic use (75%) as compared to the “maybe willing” (0%) and “not willing” participants (0%). Interviews indicated that the top two factors that motivated participation included the need for new treatment options (31.7%) and benefits to personal pain management (31.7%). The top two discouraging factors included practical difficulties of research participation (16.7%) and adverse events associated with psilocybin (16.7%).

DISCUSSION

The study design of the PEACE-PAIN trial is supported by patient survey responses but may benefit from potential modifications, namely incorporating thorough discussions of the current evidence for efficacy, safety, tolerability, and approaches to address adverse effects of psilocybin. Additionally, the study findings, particularly the interest in participation by individuals with prior psychedelic use, may have implications beyond the PEACE-PAIN trial, as it can be used to inform other psilocybin trials.

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Ultrasound X fluoroscopic guidance for needle placement during spinal injections for pain management: a systemic review and meta-analysis

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INTRODUCTION

Neck and low back pain are among the most prevalent health conditions, associated with disability-adjusted life years (DALY's). Steroids and analgesics spinal injections are considered the main approaches to ease this chronic pain. Fluoroscopy is a widely used method for fast and effective needle spinal placement. Ultrasound (US) has been proposed as a less expensive and less radioactive alternative for this procedure. Nevertheless, it remains uncertain whether ultrasound-guided spinal injections provide sufficient pain reduction, disability improvement, or a preferable side effect profile compared to fluoroscopy guidance. Thus, we conducted a systematic review and meta-analysis to compare both strategies when applied to the nonpediatric population.

METHODS

PubMed, EMBASE, and Cochrane databases were queried for randomized controlled trials (RCTs) and observational studies comparing spinal steroids or anesthetic injections under US *vs* fluoroscopy guidance. Two different authors selected the articles based on previously established inclusion and exclusion criteria, and any disagreement was solved by a third author. The data was independently collected by two parties, and any differences were confirmed with proofreading of the selected papers. The outcomes assessed included pain scores after one and three months of the procedure, using the visual analog scale (VAS). The level of disability was analyzed via the Oswestry Disability Index (ODI) after one and three months. Overall side effects and procedure duration were also analyzed. Statistical analyses were performed using the R Studio software (version 2023.06.0+421) using the random effects model.

RESULTS

Nineteen studies were included, comprising 12 RCTs and 2,057 patients, of whom 48.76% were in the US group. There were no statistically significant differences among pain scores at one and three months (mean difference [MD], −0.03; 95% confidence interval [CI], −0.18, 0.13; *P* = 0.10; *n* = 1,543, and MD, 0.02; 95% CI, −0.08, 0.12; *P* = 0.95; *n* = 1,847, respectively). ODI at one and three months (MD, 0.40; 95% CI, −0.41, 1.21; *P* = 0.23; *n* = 1,086, and MD, 0.21; 95% CI, −0.30, 0.72]; *P* = 0.68; *n* = 1,206, respectively), overall side effects (odds ratio, 0.94; 95% CI, 0.68, 1.32; *P* = 0.91; *n* = 1,433), and procedure duration (MD, -1.65; 95% CI, −3.66, 0.36; *P* = 0.01; *n* = 792) also showed no statistically significant differences between groups.

DISCUSSION

Our findings suggest no differences between the use of US or fluoroscopy for spinal injections in the nonpediatric population in terms of efficacy and safety. Radiation is a known mutagenic source, possibly leading to cancer and other diseases. Moreover, the cost and health care burden should be considered when choosing a treatment option to deliver care. US is both more competitively priced and nonradioactive in comparison to fluoroscopy. Therefore, US guidance seems a feasible, less harmful, and adequate choice for needle placement during spinal injections.

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