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COMPARISON OF CONTINUOUS LOCAL ANAESTHESIA IN BREAST CARCINOMA PATIENTS: PROSPECTIVE STUDY

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ABSTRACT

Despite a meticulous surgical procedure, a minor lesion of these nerves may cause discomfort. There is a 35 percent - 50 percent chance of de-winding numbness, pain, or paraesthesia. In the prospective randomized trial, a total of 60 patients were enrolled, half in the local anaesthetic wound infusion and half in the regular (piritramide) community. In the recovery room and on the first day after surgery, less acute and chronic pain and lower intake of piritramide and metoclopramide were recorded in the wound infusion of the local anaesthetic group, but their alertness after the surgery was higher compared to the regular group. After axillary lymphadenectomy in patients with breast carcinoma, local anaesthetic wound infusion decreases acute pain and allows for decreased opioid intake, resulting in less postoperative sedation and a reduced need for antiemetic medications. There is a statistical pattern for chronic pain relief following wound infusion of local anaesthetic.

Keywords: Breast Carcinoma; Pain Treatment; Local Anaesthetic.

INTRODUCTION

The feeling of pain is an individual experience; it relies on experiences of pain and current conditions. Surgery for breast cancer may be painful, but acute pain is mostly directly related to axillary surgery. Breast surgery, in addition, may be emotionally distressing. In patients with preoperative anxiety, the risk of clinically severe acute pain has increased. Surgery and inflammation cause peripheral nociceptors in the skin, ligaments and muscles following the intervention. A noxious stimulus is propagated to the central nervous system through small, unmyelinated C-type fibres and thinly myelinated A-delta fibres. The surgeon should prevent damage to the long thoracic and thoracodorsal nerve during axillary lymph node dissection, because the lesion of these nerves induces a muscular deficiency and results in physical deformities. Despite a meticulous surgical procedure, a minor lesion of these nerves may cause discomfort [1]. There is a 35 percent -50

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percent chance of de-winding numbness, pain, or paraesthesia.

In certain fields of surgery, local anaesthetics for postoperative an-algesia are used: orthopaedics, gastrointestinal surgery, gynaecology, urology, cardiothoracic surgery and breast cancer surgery. Continuous administration of local anaesthetics into the wound through a catheter inserted directly at the end of the surgery is a simple and effective method of supplying postoperative anaesthetics. Chronic pain syndrome is known as post-mastectomy syndrome following axillary dissection for breast carcinoma. Chronic pain syndrome is also the product of inadequately treated acute pain. Recurrent pain can be prevented by regular use of an appropriate level of pain medication. Opioid analgesics have historically given perioperative analgesia. An increased frequency of postoperative complications can be associated with high doses of opioids: respiratory failure, sedation, nautical and vomiting disorders, pruritus and ileus [2-4].

AIMS & OBJECTIVES

We hypothesized that after axillary dissection in breast carcinoma patients, a continuous injection of the local anaesthetic through a wound catheter decreases acute pain more effectively than regular intravenous opioid analgesia. Our prospective randomized research also examined if patients with a continuous local anaesthetic infusion had a lower intake of opioids, a lower need for antiemetic medications, lower sedation, and less severe chronic pain relative to the regular category of patients with opioid-based analgesia.

MATERIALS & METHODS

During the routine anaesthetic examination, patients identified for axillary dissection because of breast cancer were screened preoperatively. The requirements excluding patients from our sample were allergies to local anaesthesia, male gender or analgesic dependency. Female patients undergoing surgery for breast cancer with axillary dissection were randomized to either the elastomeric pump wound catheter group or the regular piritramide care group. A total of 60 patients were enrolled for a period of 1 year: 30 patients in the evaluation group and 30 in the regular group.

Informed consent and ethical board:

The thesis was reviewed and conducted in compliance with the ethical principles set out in the applicable version of the 1964 Declaration of Helsinki by the relevant Ethics Committee. The Institutional Review Board accepted our research and performed it with the understanding and approval of the human subjects concerned [6-8].

STATISTICAL ANALYSIS

According to the distribution of results, the student t-test or Mann-Whitney U test was performed. As applicable, the relation between categorical variables was tested by chi2 or Fisher's exact test. All comparisons were two-sided and it was found statistically important to have a p-value of 0.05.

RESULTS AND DISCUSSION

Drug administration:

All the study population got a single prophylactic dose of antibiotic prior to administration start of surgical procedure. Patients of 4 mg of dexamethasone was prescribed for diabetes. All 1 mg of granisetron was given to patients in order for the avoidance of nausea. Before the conclusion of the surgical operation, procedure, our norm was received by all patients a- mixture of algesic infusion, which contained 7.5 mg, Piritramide, 2.5 grams of metamizole and 10 grams of metoclopramide. All the sample population earned a single antibiotic prophylactic dosage prior to administration beginning of the surgical process. Patients with diabetes, 4 mg of dexamethasone was prescribed [9-11]. All patients were given 1 mg of granisetron in order to for the intention of reducing nausea. Until the surgical surgery ends, procedure. All patients got our regular mixture of algesic infusion containing 7.5 mg of algesic infusion Piritramide, metamizole, 2.5 grams, and meto-10 grams Clopramide [12-14].

Eleven experienced surgeons performed all the lymphadenectomies. There were no major variations between the different surgeons, either in the hospital stay VAS score (p = 0.66) or in the chronic pain rate after six months (p = 0.32). Table 1 presents data on postoperative pain in VAS ratings.

Table 1: Pain, consumption of drugs and alertness in local anaesthetic group and standard group of patients

		Local anaesthetic group	Standard group	p-value
VAS in recovery room	At rest	0.0	1.0	0.05
	At movement	1.0	3.0	0.02
VAS pain on surgery day	At rest	0.3	1.5	0.005
	At movement	1.3	3.2	0.007
VAS pain on first pooperative day	At rest	0.3	1.2	0.05
	At movement	3.2	3.8	0.119
Opioid consumption during first 24 hours (mg)		7.5	19.4	<0.0001
Metamizol consumption during first 24 hours (g)		2.5	3.5	<0.0001
Metoclopramide consumption during first 24 hours (mg)		10	17.7	<0.0001
Tramadol/paracetamol consumption during first three days (tablets)		4	6	0.035
Diclofenac consumption during first three days (mg)		200	200	0.13
Alertness OAA/S six hours after surgery		5	4.5	0.001
Pain after three months		5	15	0.01

Axillary lymph node dissection is the normal surgical treatment for breast cancer or melanoma positive lymph nodes. Unfortunately, long-term morbidities may occur: persistent post-operative pain, reduced mobility of the shoulder and/or lymphoedema. Our current prospective randomized research found that, relative to systemic intravenous analgesia with opioids, acute pain after breast cancer surgery and axillary lymph node dissection was less severe and serious after continuous wound infusion of local anaesthetic. To our knowledge, in breast carcinoma patients, there were only six studies concerned with the use of local anaesthetic for postoperative analgesia. A cost-benefit analysis was not performed in our research. The medication costs in both research arms were almost the same [15].

CONCLUSION

In conclusion, our prospective randomized research verified that the use of an elastomeric pump wound catheter with a local anaesthetic is safe, simple and efficient to relieve acute post-operative pain. Continuous injection into the wound of a local anaesthetic decreases the intake of opioids and contributes to less postoperative sedation and a decreased need for antiemetic medications. For both patients and nurses, the elastomeric pump is convenient. Patients are also more alert, do not experience discomfort and do not require intensive supervision and nursing care as a result.

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