

CASE REPORT

CONTINUOUS INTRA-ARTICULAR PATIENT-CONTROLLED ANALGESIA IN A CANCER PATIENT WITH A PATHOLOGICAL HIP FRACTURE A CASE REPORT

S. SHABAT^{1,3}, A. STERN^{1,3}, Y. KOLLENDER^{2,3}, M. NYSKA^{1,3}

Pain management is one of the major goals to achieve in treating terminal patients. Managing severe pain with drug therapy by using a combination of narcotics, non-narcotics, and adjuvant drugs provides the best results for most patients. In patients with fractures due to bone metastases there is a relative indication for operative treatment if the patient is expected to survive the operation and to recover in the postoperative period.

In this case report a terminal 48 year-old female with a pathological femoral neck fracture is presented. No operative treatment was offered because of her bad general status. Pain control was maintained by continuous administration of local analgesics directly into the intra-articular femoral space, through a system of patient-controlled analgesia (PCA). The visual-analogue pain scale (VAS), which was maximal before beginning of this treatment, was markedly reduced during the treatment, and was again elevated to maximum after the intra-articular catheter was removed.

Although continuous regional analgesia to a fractured bone which involves the joint is not a generally acceptable method and carries some risks it has a role in a selected group of patients.

Keywords : femoral neck ; fracture ; metastasis ; analgesia.

Mots-clés : col fémoral ; fracture ; métastase ; analgésie.

INTRODUCTION

Adequate pain control in the terminal oncological patient is one of the major goals to achieve (9).

Two major pain control methods are available : systemic analgesia which includes intravenous, intramuscular or rectal administration of various analgesic drugs, and regional analgesia (8). Direct analgesia to a fractured bone (hematoma block) is a well-known method and is mainly used prior to fracture reduction (5). In recent years numerous publications appeared on brief intra-articular analgesia, mainly after knee arthroscopy or even after knee arthroplasty (7) or ligament plasty (13). However, continuous regional analgesia to a fracture which involves the joint is not a generally acceptable method and carries some risks.

A case is reported of a terminal oncological patient with a pathological fracture of the right femoral neck who was treated with continuous patient-controlled analgesia (PCA) to the hip joint.

CASE REPORT

A 48-year-old woman with metastatic breast carcinoma was transferred to the department of orthopedic surgery from the oncology department, because of unbearable pain in the right hip area,

¹ Department of Orthopedic Surgery, Sapir Medical Center, Kefar-Sava, Israel.

² National Unit of Orthopedic Oncology, Tel-Aviv Sourasky Medical Center, Tel-Aviv. Israel.

³ Tel-Aviv Sourasky Medical Faculty, Tel-Aviv, Israel.

Correspondence and reprints : Shay Shabat, Department of Orthopedic Surgery, Sapir Medical Center, 48 Tchernichovsky St., Kefar-Sava 44281, Israel.

which had started abruptly the day before and was not relieved by intravenous administration of narcotics. The patient was terminal as defined by her oncologist, and she received combinations of intravenous drugs for analgesia. On physical examination severe tenderness over the right hip area above the greater trochanter region was noted. Plain radiographs showed an intracapsular fracture of the right femoral neck with evidence of bone metastases (fig. 1). The score on a visual-analogue pain scale (VAS) (6) was 10. Under local analgesia with lidocaine hydrochloride 1%, a catheter was inserted into the affected hip joint through an anterolateral approach and was left there. A system of patient-controlled analgesia (PCA) was connected to this catheter (4), which allowed continuous administration of bupivacaine hydrochloride 0.25%. If the patient felt pain in spite of the continuous bupivacaine hydrochloride administration, she could have an intra-articular bolus of 4 mg morphine hydrochloride each hour by pressing the PCA button. Careful respiratory and hemodynamic monitoring showed no evidence of respiratory deterioration, arrhythmia or blood pressure change. The catheter was left in place for 48 hours and was then taken out. In these two days the patient had remarkably less pain with a VAS score of 3 that increased again to 10 after removal of the intra-articular catheter. The patient was transferred to a hospice for terminal patients and died 3 days later.



Fig. 1. — Plain radiographs of the pelvis and proximal femur showing a femoral neck fracture on the right. A lytic lesion just above the right acetabulum is noted.

DISCUSSION

Patient-controlled analgesia (PCA) has been widely used in managing postoperative pain, and in cancer patients whose pain cannot be controlled with oral narcotics (3). This analgesia is usually administered intravenously, epidurally or intrathecally. Long-term placement of catheters or other foreign bodies into a joint is not a generally accepted method and carries a risk of infection and/or nonunion.

Numerous studies examined the effect of continuous regional analgesia in hip fractures, but none of them used continuous intra-articular administration (1,2,10). In this case we were confronted with a pathological fracture of the femoral neck in a terminal patient with metastases, who did not have any subjective reduction of pain intensity by regular intravenous administration of narcotics; hence continuous intra-articular drug administration seemed a reasonable option. Moreover, in such a patient, whose life expectancy is short, the main goal of treatment is palliative, and any attempt to reduce pain should be made, even in such an unusual way, which carries a risk of joint infection.

Pain control was measured by the VAS (6). This scale, although subjective, is widely used in pain management and is considered to be more precise and to better reflect what a patient actually feels than other tests (11). In another study by Price et al., it was concluded that different patient groups used this scale in a consistent matter (12). In this patient a VAS score of 10 prior to intra-articular drug administration, that was reduced to 3 following continuous intra-articular drug administration, and then increased to 10 again after catheter removal, was clear evidence to us that this method was effective.

We conclude that this mode of continuous intra-articular analgesic administration has a role in a selected group of patients. More clinical trials are needed in order to establish specific conclusions.

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SAMENVATTING

S. SHABAT, A. STERN, Y. KOLLENDER, M. NYSKA. Continue intra-articulaire door de patiënt gecontroleerde analgesie bij een kanker patiënt met een pathologische heupfractuur. Case report.

Bij terminale patiënten is pijncontrole een der belangrijkste doelstellingen. Ernstige pijn wordt bij de meerderheid der patiënten best medicamenteus behandeld

met een combinatie van verdovende middelen, en analgetica. Bij pathologische fracturen door been metastases kan er een indicatie bestaan voor heelkundige fixatie als de vooruitzichten zijn dat de patiënt de operatie en de herstelperiode gaat overleven

Het gaat hier om een 48-jarige vrouw met een pathologische fractuur van de femurhals. Haar algemene toestand was slecht en er werd geopteerd voor conservatieve aanpak. De pijn werd behandeld door een van patiënt gecontroleerde (PCA) continue lokale toediening van analgetica in de gewrichtsholte van de heup. De visus analoge pijnschaal, maximaal voor de aanvang van de therapie, verlaagde aanzienlijk tijdens de therapie en verhoogde weerom erg na het verwijderen van de catheter.

Continue regionale anesthesie voor een intra-articulaire breuk is zeker geen algemeen aanvaardde aanpak en houdt risico's in. De methode heeft zeker een plaats bij geselecteerde gevallen

RÉSUMÉ

S. SHABAT, A. STERN, Y. KOLLENDER, M. NYSKA. Analgésie intra-articulaire continue contrôlée par le patient dans un cas de fracture pathologique sur métastase de la hanche : présentation d'un cas.

Le traitement de la douleur est un des objectifs majeurs du traitement des patients en phase terminale. Dans la plupart des cas, ce but peut être atteint par un traitement médicamenteux associant des narcotiques, des non-narcotiques et des drogues adjuvantes. Chez des patients qui présentent des fractures pathologiques sur métastases, un traitement chirurgical est indiqué si l'on pense que le patient peut supporter l'opération et ses suites.

Les auteurs rapportent le cas d'une patiente de 48 ans en phase terminale, qui a présenté une fracture pathologique du col fémoral. Son état général ne permettait pas le traitement chirurgical. Le contrôle de la douleur a été obtenu par l'administration continue d'analgésiques locaux, directement dans la cavité articulaire, via un système d'analgésie contrôlée par le patient. Le score de douleur sur une échelle visuelle analogique était au plus haut avant traitement ; il a été réduit de façon marquée par le traitement et s'est à nouveau élevé jusqu'au maximum après retrait du cathéter intra-articulaire.

L'analgésie régionale continue au niveau d'une fracture pathologique intra-articulaire n'est généralement pas une méthode acceptable, et elle comporte des risques, mais elle peut être intéressante dans des indications tout à fait précises.