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Efficacy and safety of ultrasound-guided interventional management in chronic pain patients: Cohort follow-up[☆]



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ABSTRACT

Introduction: Chronic pain is a highly prevalent condition and its treatment includes multiple measures, including ultrasound-guided analgesic blocks. There are no reports available including different types of blocks in chronic pain patients.

Objective: To determine the clinical efficacy and safety of ultrasound-guided interventional management in chronic pain patients that consulted at Instituto Colombiano del Dolor in 2011.

Materials and methods: Descriptive follow-up trial of a cohort of 149 chronic pain patients undergoing ultrasound-guided interventional therapy at Instituto Colombiano del Dolor in Medellín city, from May through December 2011. Data were collected prior to the procedure, at day two and then one month later. Pain intensity was measured with the visual analog scale.

Results: 149 patients were analyzed. The most common block was the supra-scapular nerve. The efficacy of the blocks was 79.2% and 38.9% after two days and one month, respectively, with a statistically significant difference between the intensity of the initial pain and pain at follow-up. The incidence of complications was low. There were no differences in the outcomes between the patients with a diagnosis of fibromyalgia and those who had not been receiving any prior pharmacological therapy.

Conclusions: Ultrasound-guided interventional pain management is an effective and safe technique.

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Eficacia y seguridad del manejo intervencionista guiado por ultrasonografía en pacientes con dolor crónico: seguimiento a una cohorte

R E S U M E N

Palabras clave:

Dolor crónico
Ultrasonografía
Nervios periféricos
Bloqueo nervioso
Dolor

Introducción: El dolor crónico es una enfermedad de alta prevalencia, su tratamiento incluye múltiples medidas, entre ellas los bloqueos analgésicos guiados por ultrasonido, no existen reportes que incluyan diferentes tipos de bloqueos en pacientes con dolor crónico.

Objetivo: Determinar la eficacia clínica y seguridad del manejo intervencionista guiado por ultrasonografía en pacientes con dolor crónico atendidos en el Instituto Colombiano del Dolor durante el año 2011.

Materiales y métodos: Estudio de tipo descriptivo de seguimiento a una cohorte de 149 pacientes con dolor crónico sometidos a tratamiento intervencionista guiado por ultrasonografía en el Instituto Colombiano del Dolor en la ciudad de Medellín entre los meses de mayo y diciembre del año 2011. Se obtuvieron datos antes del procedimiento, a los dos días y un mes después. La intensidad del dolor se midió con la escala visual análoga.

Resultados: Se analizaron 149 pacientes, el bloqueo más frecuente fue del nervio supraescapular. La eficacia de los bloqueos fue del 79,2% y 38,9% a los dos días y al mes respectivamente, con una diferencia estadísticamente significativa entre la intensidad del dolor inicial y el de los seguimientos. La incidencia de complicaciones fue baja. No hubo diferencias en los resultados finales entre los pacientes con diagnóstico de fibromialgia y en quienes no venían recibiendo tratamiento farmacológico previo.

Conclusiones: El manejo intervencionista del dolor guiado por ultrasonografía es una técnica eficaz y segura.

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Introduction

Pain is a frequent cause of visits to the doctor and there is an increasing need to provide optimal and safe treatment. The use of ultrasonography in interventional analgesia has become increasingly relevant for pain management in the last 10 years.¹

Ultrasound guidance improves the safety of regional anesthesia because it reduces the volume of the local anesthetic agent required and hence lowers the incidence of systemic toxicity, shortens the time to perform the block, reduces the number of needle insertions and provides faster onset of action. Moreover, it reduces the risk of accidental puncture of other neighboring structures because it enables the visualization of the peripheral nerves, of the surrounding structures and the needle. The disadvantages are few but important, such as availability and the need for additional training.²⁻⁶

There is increasing certainty about the importance of using ultrasonography in interventional analgesia to complement other more extensively used techniques – i.e. fluoroscopy – and about the need to promote ultrasound training in the anesthesia graduate programs and pain management subspecialties at various universities around the world and as a topic of general interest at international congresses.

Consequently, a trial was designed to answer the question: Is ultrasound-guided interventional management effective and safe for chronic pain patients?

Overall objective

To determine the clinical efficacy and safety of ultrasound-guided interventional management in chronic pain patients.

Specific objectives

- To describe the study population in terms of the socio-demographic characteristics.
- To determine the major blocks performed in chronic pain patients.
- To identify any changes in the pain intensity as described by the patients before and after treatment.
- To assess the efficacy of interventional therapy in terms of pain relief.
- To assess the association between pain relief and sex, diagnosis of fibromyalgia and prior oral pharmacological treatments.
- To determine the safety of the blocks in terms of the occurrence of complications.

Materials and methods

With the approval of the Ethics Committee, a descriptive follow-up trial of a cohort of chronic pain patients that received ultrasound-guided interventional therapy, using 0.5% bupivacaine without epinephrine plus 4 mg of dexamethasone

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