



## SCIENTIFIC LETTER

## Transversus abdominis plane block in acute pancreatitis pain management<sup>☆</sup>



### Bloqueo del plano del músculo transverso del abdomen en el tratamiento del dolor en la pancreatitis aguda

Acute pancreatitis is an inflammatory condition often accompanied by severe abdominal pain. Achieving an adequate level of analgesia is a challenge which can remain unresolved in some patients. Initial treatment includes non-opioid analgesics, to which opioids are added if adequate pain relief is not achieved.<sup>1</sup>

A surprising article has reported the utility of transversus abdominis plane (TAP) block in the control of pain in two patients with chronic pancreatitis.<sup>2</sup>

However, there is no evidence to date on the application of TAP block in the treatment of acute pancreatitis pain.

We set out to evaluate the effect of TAP block in the analgesic management of patients with acute pancreatitis.

To do this, we conducted a case series study with patients with mild-to-moderate acute pancreatitis according to the Atlanta criteria.<sup>3</sup>

Patients were selected for the study according to their level of pain, determined by visual analogue scale (VAS) with a range of 0–10.

We included patients whose pain was not under control (VAS  $\geq 5$ ) two hours after receiving conventional analgesia with paracetamol (1 g every 8 h, intravenously) combined with metamizole (2 g every 8 h, intravenously). With these analgesics, it takes 30–120 min to reach the blood concentration that produces the highest level of analgesia, so no improvement in the pain would be expected after that time. In view of the need to provide a higher level of analgesia, a TAP block was performed.

All the patients therefore had the block after two hours of the initial intravenous analgesic treatment. Their level of pain was determined before the procedure, within half an hour after, and once a day until discharge from the hospital.

The patients signed a specific informed consent form before being included.

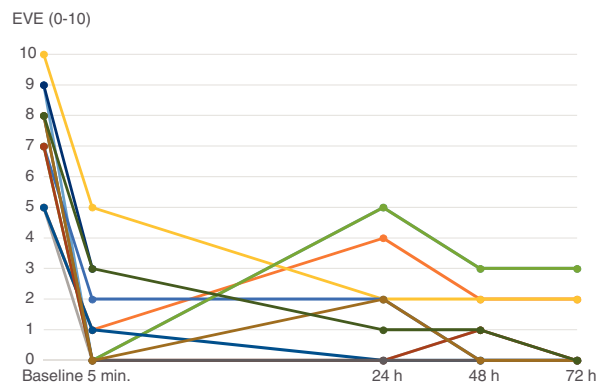
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The TAP block technique is explained below. With standard monitoring, patients were placed in the supine position. After ensuring asepsis with chlorhexidine, a linear high-frequency transducer (12–15 MHz) was placed on one side of the abdominal wall, in the midaxillary line between the costal margin and the iliac crest. We identified the structures from the superficial to the deep external oblique muscle, the internal oblique muscle and the transversus abdominis muscle. We then moved the transducer more laterally to find the point where the transversus abdominis muscle tails off to the end (posterior TAP block) and administered 10 mL of 2% mepivacaine plus 10 mL of 0.5% bupivacaine between the fascia of the internal oblique and the transversus abdominis muscle. This procedure was performed bilaterally to achieve complete abdominal wall analgesia. We chose the posterior approach in order to block the maximum number of dermatomes.<sup>4</sup>

The VAS levels before and after the TAP block are expressed as median. In the absence of a control group, which would have been treated with intravenous morphine, we decided to compare the analgesic efficacy of TAP with the standard effectiveness of intravenous morphine chloride, which is very well defined in the literature.<sup>5</sup>

Ten consecutive patients with mild-to-moderate acute pancreatitis were included.

After the TAP block, all patients had a marked decrease in pain levels. The mean VAS score before the TAP block was 7.33 (SD 1.67), then after the procedure, 1.25 (SD 1.66), 1.91 (SD 1.97), 1.18 (SD 1.17) and 0.91 (SD 1.30) at 30 min, 24 h, 48 h and 72 h respectively. Pain relief was significant in all cases and occurred almost immediately (Fig. 1). After the block, the patients only needed the conventional analgesia previously prescribed to control their pain, with VAS levels maintained at <3.



**Figure 1** Pain level at baseline and after application of TAP block.

In seven of the ten patients, the VAS score at 72 h was 0. There were no procedure-related complications. The mean hospital stay was 6.9 days (SD 3.67) and a good clinical outcome was obtained in all cases; the patients were discharged without incident.

In recent years, the analgesic efficacy of TAP block has been demonstrated in somatic pain generated in the abdominal wall after different abdominal surgery procedures.

Acute pancreatitis pain has traditionally been classified as visceral in nature. However, we observed the effectiveness of the TAP block in controlling this type of pain in our study. The technique was found to be easily reproducible and safe.

We would like to highlight the almost immediate effect of the analgesia obtained by the TAP block, a differentiating element with respect to any type of therapy with intravenous drugs. The analgesic effect is achieved by the local application of the anaesthetic to the nerve root, which explains its speed. In contrast, in patients treated with intravenous morphine derivatives, the maximum effect is generally achieved after 15–20 min and their effect wanes after 2–3 h, meaning that successive doses have to be administered to maintain optimal levels of analgesia.<sup>5</sup>

As regards the persistence we observed in our patients of low levels of pain, we should probably attribute this to the natural improvement in the acute pancreatitis inflammatory process rather than to the TAP block itself.

This study presents a short case series, with the consequent inherent limitations when assessing the conclusions. Nevertheless, we decided to communicate our results because of the striking nature of the data we obtained. Multicentre randomised studies need to be conducted comparing standard analgesic therapies with TAP block so it can be included as a new therapeutic tool in the treatment of pain in acute pancreatitis.

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## Conflicts of interest

None.

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Sergio González Martínez<sup>a,\*</sup>, Helena Gómez Facundo<sup>a</sup>, Carmen Deiros García<sup>b</sup>, Eva María Pueyo Periz<sup>a</sup>, Ruth Ribas Montoliu<sup>a</sup>, Daniel Coronado Llanos<sup>a</sup>, Josep Masdeu Castellvi<sup>b</sup>, Montse Martin-Baranera<sup>c</sup>

<sup>a</sup> *Departamento de Cirugía, Hospital Moisès Broggi, Consorci Sanitari Integral, Barcelona, Spain*

<sup>b</sup> *Departamento de Anestesia, Hospital Moisès Broggi, Consorci Sanitari Integral, Barcelona, Spain*

<sup>c</sup> *Departamento de Epidemiología, Hospital Moisès Broggi, Consorci Sanitari Integral, Barcelona, Spain*

\* Corresponding author.

E-mail address: [sergio4762@yahoo.es](mailto:sergio4762@yahoo.es)

(S. González Martínez).

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## Giant colon lipoma complicated with intussusception and low digestive hemorrhage<sup>☆</sup>



## Lipoma cólico gigante complicado con intususcepción y hemorragia digestiva baja

Intestinal lipomas are the most common benign tumours after adenomatous polyps. They can originate in any segment of the gastrointestinal tract, although they are more

common in the large intestine. The prevalence in the general population is estimated to be in the range of 0.2% to 4.4% and they represent 1.8% of all benign lesions of the colon. They are usually small (less than 2 cm), their size is positively correlated with the presence of symptoms and they can cause potentially serious complications when they become larger than 4 cm (also called *giant lipomas*<sup>1</sup>).

We describe the case of a 56-year-old female with a history of obesity, multinodular goiter and fibromyalgia. She went to the Accident and Emergency department complaining of right abdominal pain and haematochezia; she had no changes in bowel habit, weight loss, anorexia or fever. Blood analysis showed mild anaemia (Hb 11.3 g/dl); other parameters were normal. Colonoscopy revealed a pedunculated polypoid lesion about 5 cm in diameter in the hepatic flexure, with no clear glandular pattern and ulcerated areas oozing blood on the surface, causing almost complete stric-

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