

Management of Chronic Postsurgical Pain Following Cholecystectomy

Parthasarathy Srinivasan, Gobinath Jayaraman

Department of Anesthesiology, Mahatma Gandhi Medical College and Research Institute, Sri Balaji Vidyapeeth University, Puducherry, India

Abstract

A 50-year-old female presented with severe pain at the cholecystectomy scar site of 4 months' duration. She had an open cholecystectomy done followed by continuous pain from the time of discharge. She was diagnosed as a case of chronic postsurgical pain (CPSP) syndrome. We administered right-sided erector spinae (ES) block by ultrasound guidance depositing 15 ml of 0.25% bupivacaine and 40 mg of methylprednisolone at site of incision. The visual analog score showed significant improvement from 7/10 to 2/10 for the next 2 months of follow-up. We conclude that ultrasonography-guided ES block combined with intralesional steroid is a viable treatment option in cases of CPSP. This is possibly the first case report of postcholecystectomy chronic pain managed with ES block.

Keywords: Chronic pain, erector spinae, plane block, postoperative

INTRODUCTION

Chronic postsurgical pain (CPSP) syndrome is clinically defined based on the criteria given below.

1. The pain ought to have developed after a surgical procedure with at least 2 months duration
2. The other causes of the pain should be excluded, such as recurrence of malignancy or infection
3. The possibility that the pain is continuing from a preexisting problem should be explored and exclusion should be attempted.

Various factors including surgical factors, psychological factors, and extent of early postoperative analgesia have been proposed as possible risk factors for developing CPSP.^[1] A number of patients suffer due to a lack of awareness of the condition. Different treatment modalities such as nerve and plane blocks, intralesional steroid, and psychiatric counseling have been done to counter this pain.^[2,3]

We report a case of successful management of a postcholecystectomy CPSP with a combined erector spinae (ES) block and intralesional steroid injection.

CASE REPORT

A 50-year-old female reported to us with complaints of pain over the right upper abdomen for the past 4 months, which

was insidious in onset, progressive in nature, and present throughout the day. This was a dull-aching pain not relieved with routine analgesics. There were no associated symptoms such as abdominal distension, vomiting, constipation, fever, or trauma. The typical neuropathic component was absent. There was no similar illness in the past. She underwent an open cholecystectomy around 4 months ago under general anesthesia followed by continuous symptoms. A thorough clinical examination was normal. Examination of the surgical scar showed mild hyperalgesia without allodynia [Figure 1]. Routine investigations and ultrasonography abdomen was normal. She was now diagnosed as CPSP syndrome. The patient's pain was assessed by an 11-point visual analog scale (VAS) and was noted to be 7/10. The plan was to administer a combined ES block with intralesional steroid. The patient was informed about the procedure and with written informed consent for both the procedure and sharing of her data; an ultrasound examination was done to identify the transverse process of T4 vertebra. All the three muscles (trapezius, rhomboids major, and ES) were identified 15 ml of 0.25% bupivacaine at T4 level in the space between

Address for correspondence: Prof. Parthasarathy Srinivasan, Mahatma Gandhi Medical College and Research Institute, Puducherry, India. E-mail: painfreepartha@gmail.com

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Figure 1: Right subcostal scar with chronic postsurgical pain

transverse process and ES muscle [Figure 2]. Forty milligrams of methyl prednisolone (depomedrol) was deposited at the site of incision. The patient had immediate pain relief with a VAS score of 2/10. The patient was followed up for the next 2 months and the VAS score was analyzed each month and it was 2–3/10. There were no complications.

DISCUSSION

Postoperative complications following cholecystectomy are uncommon and usually reflect the degree of peritonitis that was present at the time of surgery, intraoperative spillage, and intercurrent diseases that predisposed to complications. Wound infection is the most common postoperative complication.^[4] Our patient was a case of open cholecystectomy with neither infection nor intercurrent illness. In our case, we had all the four criteria of CPSP fulfilled. The incidence of CPSP is very variable and roughly between 30% and 35% after general surgery.^[2] A high index of suspicion and awareness about this condition is warranted. The extents of trauma, nerve injuries, tissue inflammation, and adequacy of early pain relief have been described as pain generators in CPSP.^[2] The ultrasound-guided ES plane (ESP) block is a recently described block described for postoperative analgesia after various surgeries. ESP block has effect on both visceral and somatic pain; therefore, its use in laparoscopic cholecystectomy and other abdominal surgeries can be advantageous.^[5] There are only two reports of postthoracotomy pain syndrome and shoulder pain treated with ESP block.^[6,7] Hence, in our case, we used the ES block with bupivacaine to manage CPSP. Intralesional corticosteroid (CS) injections have been used to treat a variety of dermatological and nondermatological diseases with variable results.^[8] The main purpose of the injection is to attain a high local concentration of the steroid at the operated site, without significant systemic absorption, thus avoiding its side effects. We used the depot preparation to improve the outcome of the patient with decreased side effects. CS has been described for this entity in a patient with CPSP after appendicectomy where they have used a combined TAP

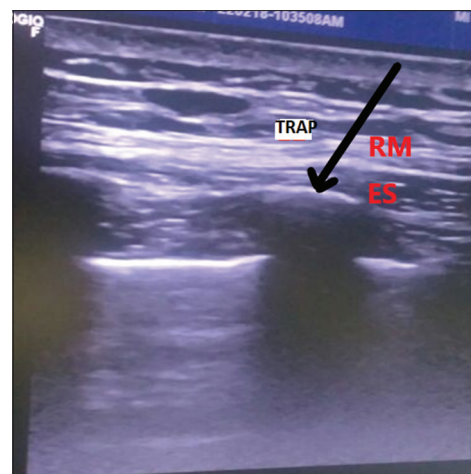


Figure 2: The plane of erector spinae plane block with a black arrow. Trap = Trapezius, RM = Rhomboids major, ES = Erector spinae

block with intralesional steroid with good pain relief.^[9] Hence, in our case, after giving combined treatment in a single sitting, the VAS score improved immediately from 7/10 to 2/10 which persisted for the next 2 months of follow-up of the patient. The limitations are that we did not analyze the effectiveness of individual interventions as such and if done could have been more precise and useful. It is only a single case report. The development of chronic pain due to marked nerve damage plays an important role in the occurrence of CPSP.^[10] Scar neuralgia is a damage to the nerve during trauma or incision and it is supposed to be an independent causative factor for CPSP. In our case, there is no single big nerve in the region of the scar to commit nerve entrapment.

CONCLUSION

CPSP is a rare yet a definite clinical entity after cholecystectomy. We report a successful management of such a case with combined ultrasound-guided ESP block and intralesional CS. The patient had significant pain relief for the next 2 months follow-up without any side effects.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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