

Utilizing a differential spinal blockade in chronic pelvic pain to differentiate nociceptive vs. sympathetic pain: a case series

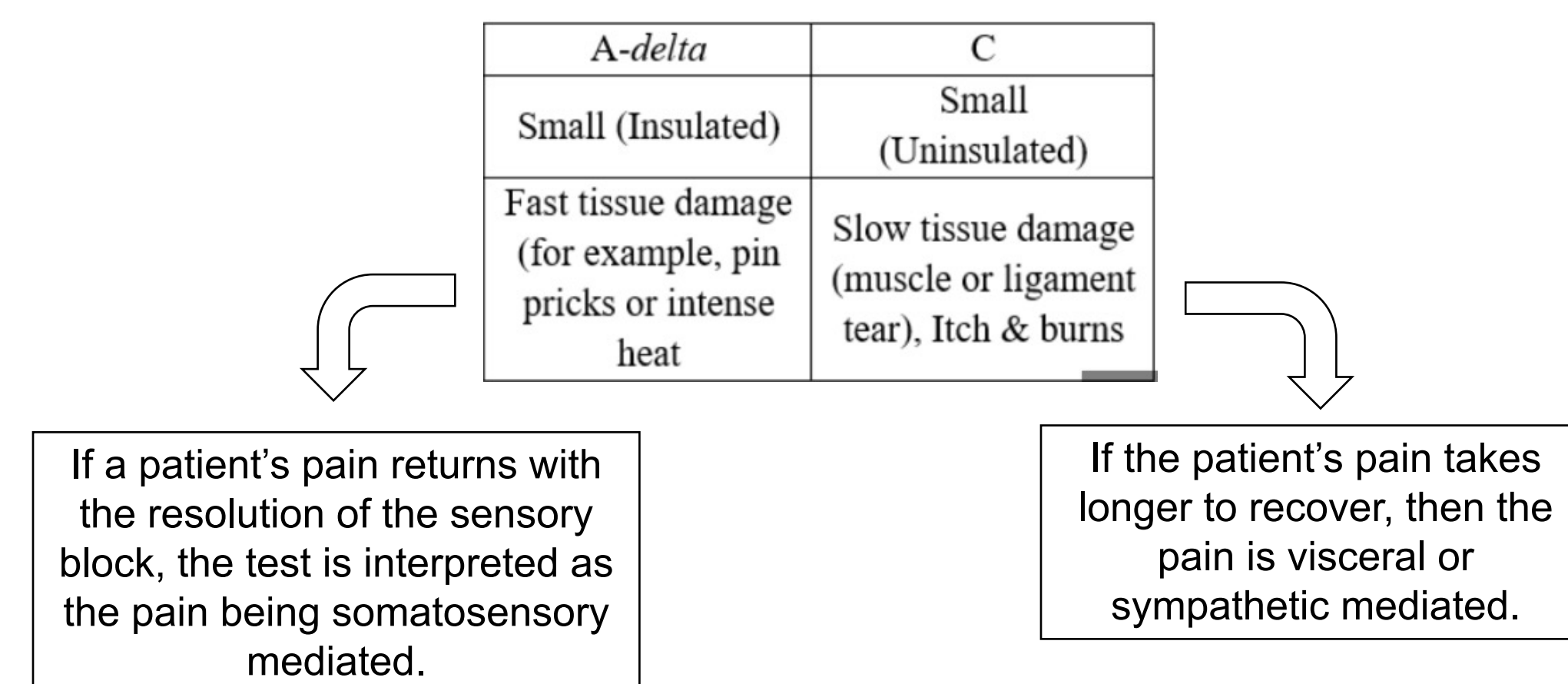
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INTRODUCTION

- Chronic pelvic pain syndrome (CPPS) is estimated to affect up to 24% of women of childbearing age¹.
- Due to the complexity of innervation in the pelvic region, it can be challenging to ascertain if the pain is nociceptive, visceral/sympathetic, or psychogenic^{2,4}.
- A differential spinal blockade (DSB) is the clinical phenomenon observed when using neuraxial local anesthetics where autonomic, sensory, and motor nerve fibers are affected at different rates⁴.
- When applied to CPPS, theoretically one would be able to distinguish the type of pain a patient has based on if the pain is decreased and more importantly when the pain returns².

DIFFERENTIAL SPINAL BLOCKADE (DSB)



- Thus, a provider can target based on the response to the DSB and streamline the diagnostic process for patients with CPPS.

METHODS AND RESULTS

- A single-center, retrospective case series where DSB was used as a diagnostic tool in patients with CPPS determining the pain mediated process in patients with CPPS.
- DSB was performed using an epidural catheter temporarily implanted at the L5 level under fluoroscopic guidance.
- Pain scores were collected prior to medication administration, and then every 5 minutes for a 30-minute period, and then every 15 minutes until the effects of the neural blockade wore off to determine if the pain returned along with the restoration of sensation.
- Based on when pain returned, pain mediation process was identified (Figure 1).
- Results shown in Table 1.

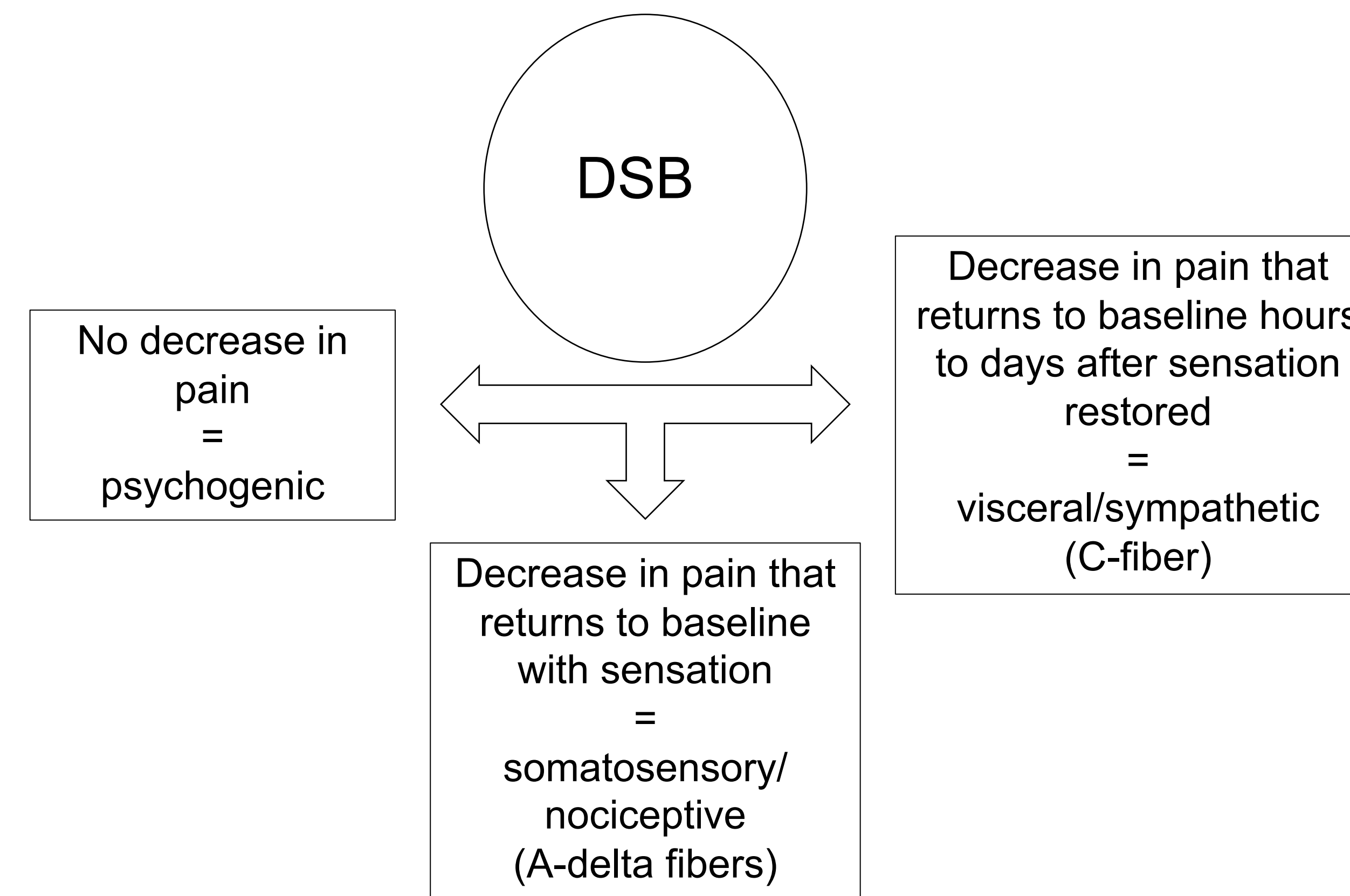


Figure 1: Pain mediation process determined when pain returned after DSB

Response	Patients (n=17)
Visceral/Sympathetic	8
Nociceptive/Somatosensory	6
Psychogenic	3

Table 1: Results of DSB in 17 patients.

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DISCUSSION

- CPPS is amongst the most difficult conditions to treat due to the complexity of the neural pathways.
- DSB is a safe and minimally invasive diagnostic tool that can be used to assess how a patient's pain is mediated thus allowing for a more focused and efficient treatment plan.
- Given the large number of targets to choose from (i.e. pudendal nerve, ilioinguinal/hypogastric, genitofemoral, ganglion of impar, hypogastric plexus, etc.), it may take several injections before any meaningful information is garnered.

CONCLUSIONS

- While the exact etiology of the pain may remain a mystery in many cases, the results of the DSB may provide valuable data on which nerves are/are not involved in the transmission of pain in patients with CPPS.
- Further prospective studies with larger sample sizes should be done to confirm the findings as well as measuring the positive predictive value (PPV) of the DSB⁵. As a result, an algorithm can be used to better understand as well as manage CPPS.