

Ziconotide

Decreasing the risk of granuloma formation. with ziconotide ¹⁾ have been indeterminate, with some case reports demonstrating regression ²⁾ and others showing persistence of inflammation ³⁾ after substitution.

Intrathecal drug therapy has been established as an effective treatment option for patients with chronic pain of malignant or non-malignant origin, with an established safety profile and fewer adverse effects, compared to oral or parenteral pain medications. Morphine (a μ -opioid receptor agonist) and ziconotide (a non-opioid calcium channel antagonist) are the only IT agents approved by the US Food and Drug Administration for chronic pain treatment. Although both are considered first-line IT therapies, each drug has unique properties and considerations.

A review of Chalil et al. will evaluate the pivotal trials that established the use of morphine and ziconotide as first-line IT therapy for patients with chronic pain, as well as safety and efficacy data generated from various retrospective and prospective studies.

Morphine and ziconotide are effective IT therapies for patients with chronic malignant or non-malignant pain that is refractory to other interventions. IT ziconotide is recommended as first-line therapy due to its efficacy and avoidance of many adverse effects commonly associated with opioids. The use of IT morphine is also considered first-line; however, the risks of respiratory depression, withdrawal with drug discontinuation or pump malfunction, and the development of tolerance require careful patient selection and management ⁴⁾.

Shao et al. showed that ziconotide intrathecal drug therapy improves pain as well as emotional components and function. The study adds prospective evidence to the literature on IDT for neuropathic pain, specifically its role in improving disability, emotional well-being, and catastrophizing ⁵⁾.

Case reports

Staub et al. reported the first case describing the use of a single-shot lumbar intrathecal trial of ziconotide and subsequent placement of lumbar (as opposed to thoracic) intrathecal ziconotide pump for persistent idiopathic facial pain (PIFP). A single-injection intrathecal trial is a low-risk, viable option for patients with this debilitating and frustrating pain condition. Successful trials and subsequent intrathecal pump placement with ziconotide may supplant multimodal medication management and/or invasive orofacial surgical intervention for PIFP ⁶⁾.

References

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Deer TR, Prager J, Levy R, et al. Polyanalgesic Consensus Conference–2012: consensus on diagnosis, detection, and treatment of catheter-tip granulomas (inflammatory masses). Neuromodulation. 2012; 15: 483–95; discussion 496

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Codipietro L, Maino P. Aseptic arachnoiditis in a patient treated with intrathecal morphine infusion: symptom resolution on switch to ziconotide. *Neuromodulation*. 2015; 18:217-20; discussion 220

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Tomycz ND, Ortiz V, McFadden KA, et al. Management of symptomatic intrathecal catheter-associated inflammatory masses. *Clin Neurol Neurosurg*. 2012; 114:190-195

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Chalil A, Staudt MD, Harland TA, Leimer EM, Bhullar R, Argoff CE. A safety review of approved intrathecal analgesics for chronic pain management. *Expert Opin Drug Saf*. 2021 Feb 15. doi: 10.1080/14740338.2021.1889513. Epub ahead of print. PMID: 33583318.

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Shao MM, Khazen O, Hellman A, Czerwinski M, Dentinger R, DiMarzio M, Gillogly M, Hadanny A, Argoff C, Pilitsis JG. Effect of First-Line Ziconotide Intrathecal Drug Therapy for Neuropathic Pain on Disability, Emotional Well-Being, and Pain Catastrophizing. *World Neurosurg*. 2021 Jan;145:e340-e347. doi: 10.1016/j.wneu.2020.10.079. Epub 2020 Oct 20. PMID: 33096281.

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Staub BP, Casini GP, Monaco EA 3rd, Sekula RF Jr, Emerick TD. Near-resolution of persistent idiopathic facial pain with low-dose lumbar intrathecal ziconotide: a case report. *J Pain Res*. 2019 Mar 8;12:945-949. doi: 10.2147/JPR.S193746. PMID: 30881103; PMCID: PMC6413753.

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