

The Treatment of Chronic Pelvic Pain Utilizing Topical Amitriptyline-Ketamine Compound Cream



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Abstract

Chronic pelvic pain (CPP) is a complex syndrome often associated with a variety of somatic, psychological, and functional impairments. This case report describes a 45-year-old woman with a history of CPP secondary to traumatic vaginal delivery, who presented with persistent vaginal and perineal pain unresponsive to prior conservative therapies. Following the initiation of a multimodal treatment regimen incorporating a compounded topical cream containing 2% amitriptyline (AMI) and 0.5% ketamine (KET), the patient reported substantial improvement in pain, functionality, and quality of life. While the cream was well tolerated initially, prolonged use led to adverse effects, including vivid dreams and nocturnal orgasmic contractions eventually necessitating reduced frequency of application. Despite this, the patient experienced continued significant pain relief and was able to resume daily activities with minimal impact on her quality of life. This case highlights the potential utility of compounded topical AMI-KET cream as part of a multimodal treatment approach for CPP, particularly in patients who are unsuitable for or unwilling to undergo interventional procedures. Further research is warranted to better define the role of topical AMI-KET cream in the management of CPP.

CASE

A 45-year-old multiparous woman (G5P4) with hypothyroidism presented with a 2-year history of chronic pelvic and vaginal pain radiating to the perineum following a traumatic delivery. Her last pregnancy involved spontaneous vaginal delivery of an 11-lb neonate complicated by shoulder dystocia, extensive episiotomy, type 3b perineal laceration, postpartum hemorrhage with retained placenta, and subsequent surgical site infection. Since delivery, the patient reported severe daily pain (10/10 in severity at worse on NRS) affecting sleep, mood, work, and sexual function. Management (gabapentin, topical benzocaine, PT) offered minimal relief; gabapentin was discontinued initially due to sedation and spasms. She declined opioids and interventional procedures.

Management

A multimodal regimen including of low-dose gabapentin, duloxetine, acetaminophen, meloxicam, and pelvic floor therapy was initiated. A compounded topical cream containing 2% AMI/0.5% KET was also added. The patient discontinued duloxetine due to irritability and headaches but agreed to start the AMI-KET cream, applied to the vaginal and perineal area three times daily. Interventional procedures such as ganglion impar or superior hypogastric block were reserved for future consideration.

Results

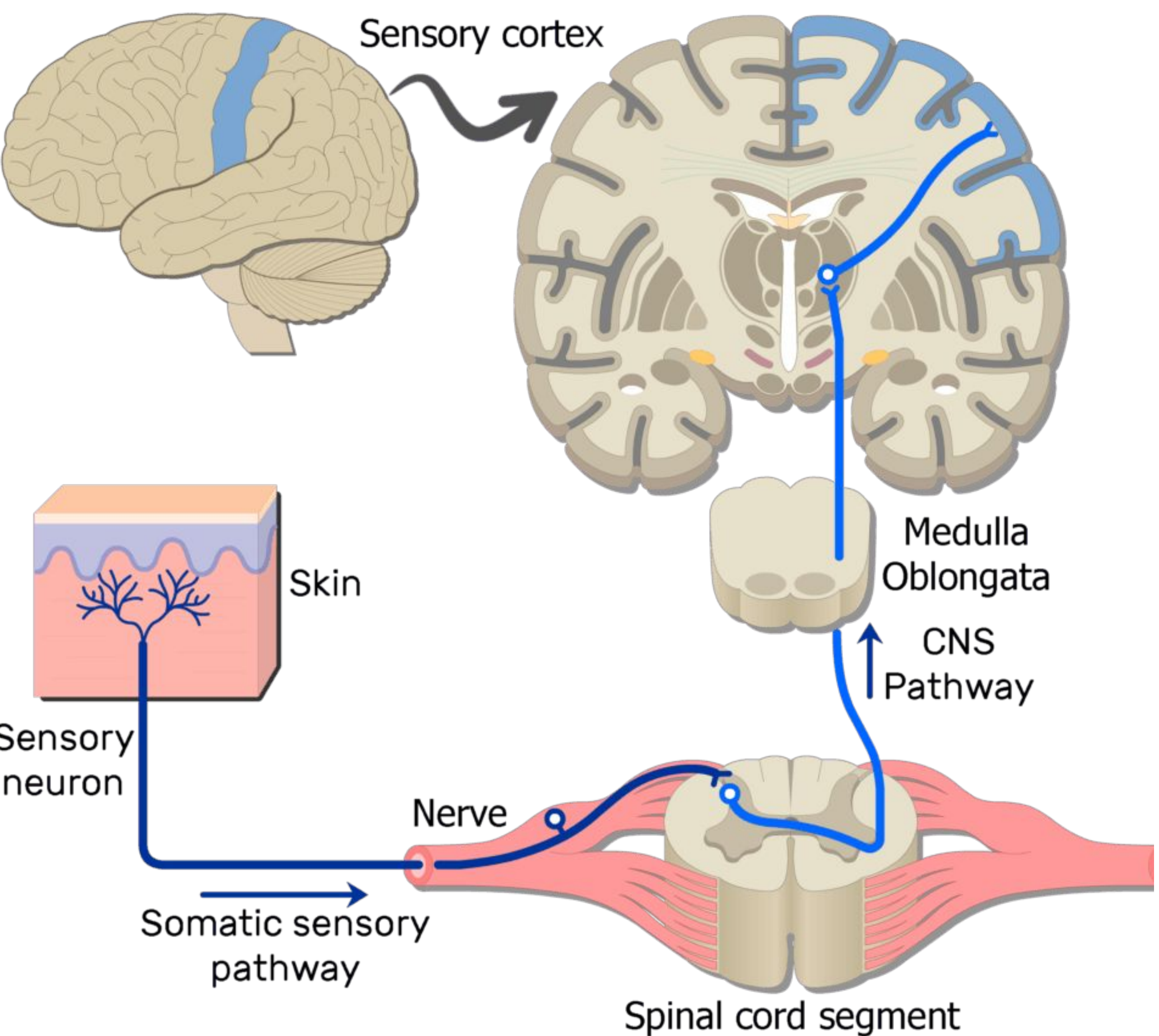
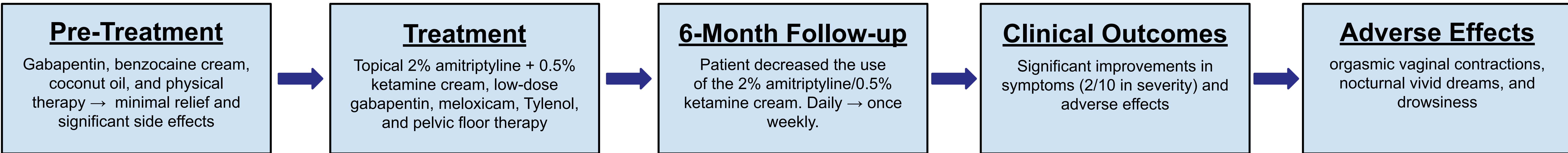


Figure 1: Pain Pathway and Central Modulation in Neuropathic Pain

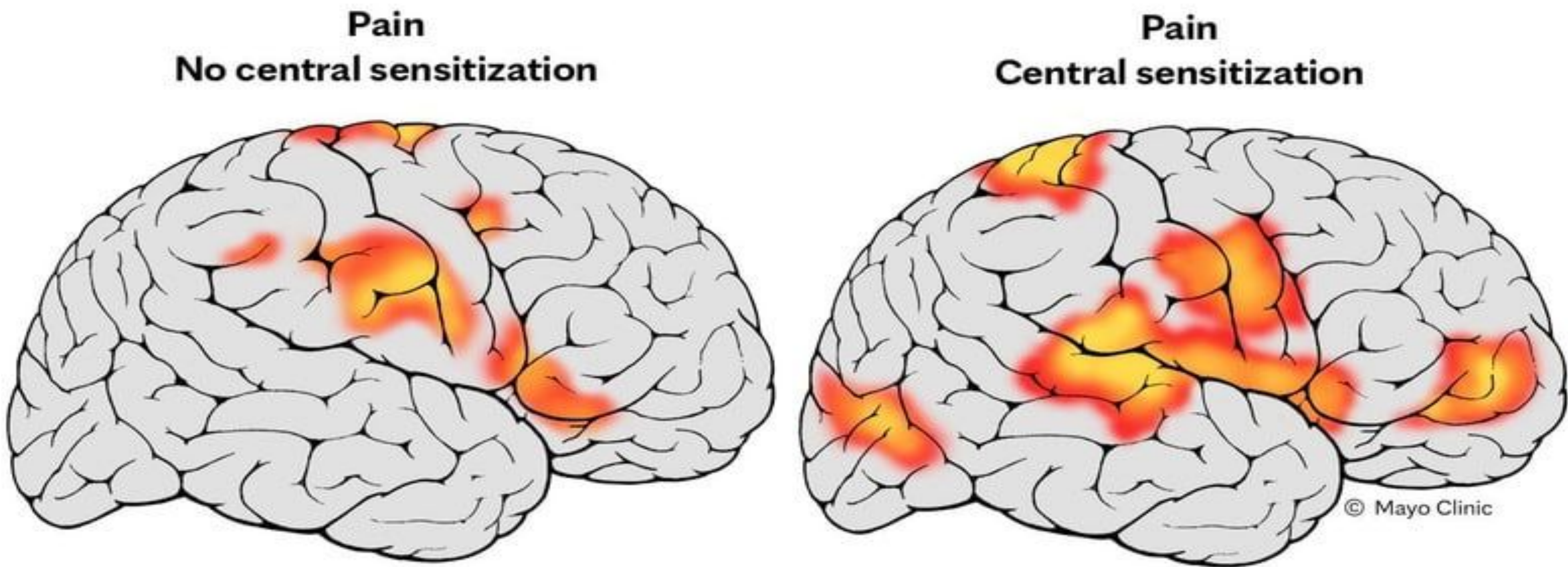


Figure 2: Brain Activity in Central Sensitization vs Normal Pain Processing

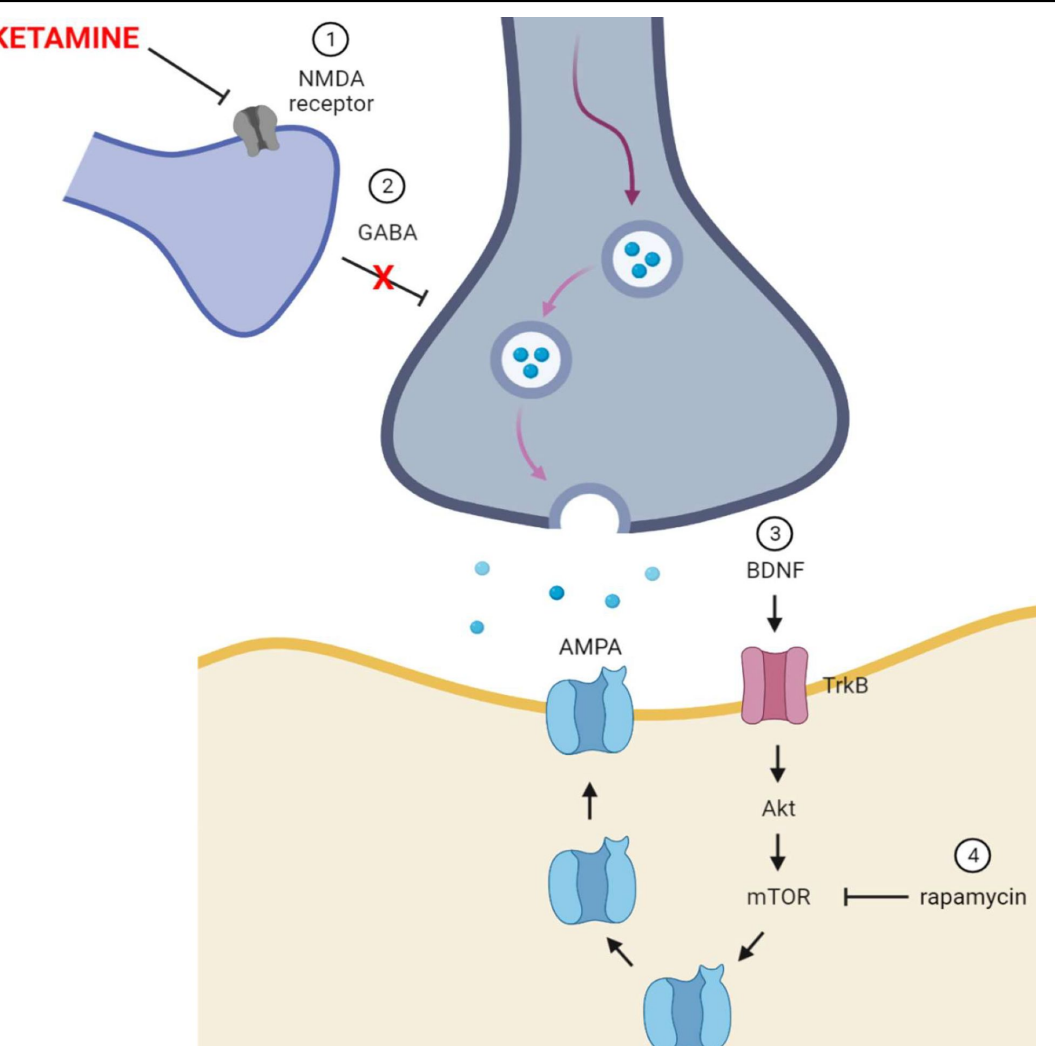


Figure 3: Ketamine at the Synaptic Level

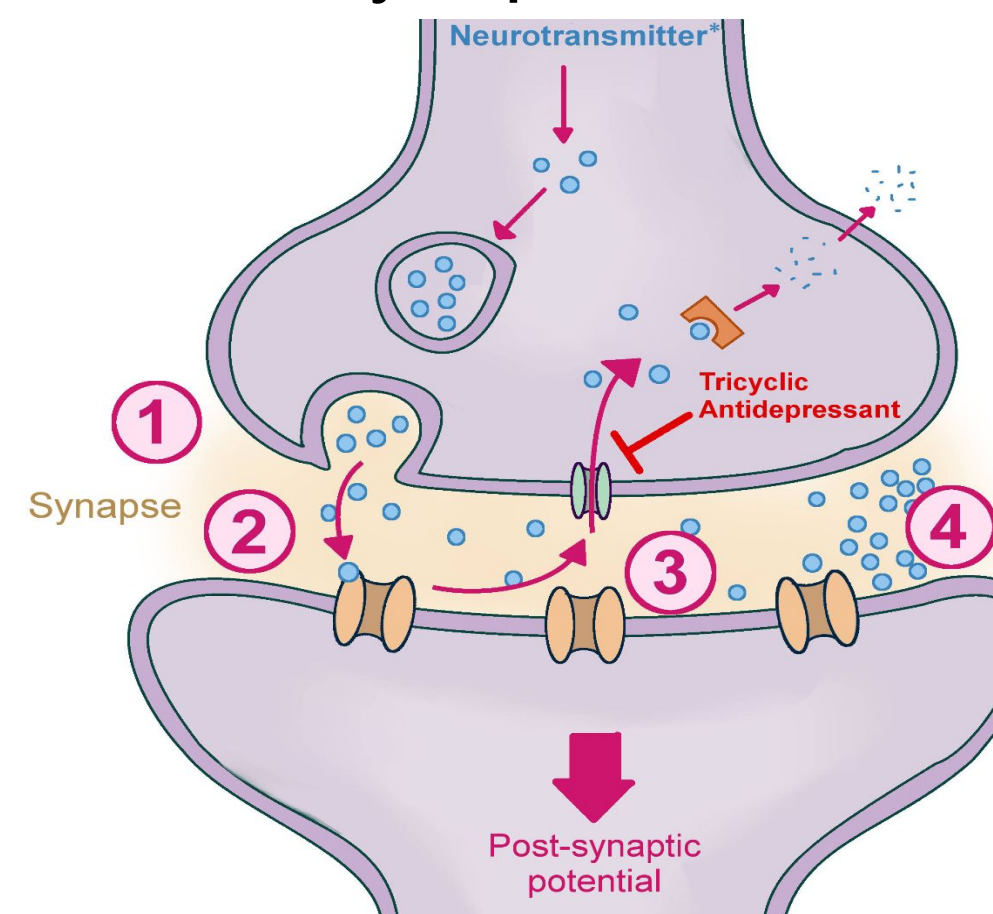


Figure 4: Amitriptyline at the Synaptic Level

Discussion

Amitriptyline is a tricyclic antidepressant that reduces neuropathic pain through serotonergic, noradrenergic, and sodium channel blockade. Topical formulations allow for localized delivery, minimizing systemic adverse effects. Ketamine, an NMDA receptor antagonist, has shown mixed results in topical applications for neuropathic pain. Literature on compounded AMI-KET cream is limited to small open-label studies, with a need for more robust randomized controlled trials. In this case, AMI-KET cream was a valuable adjunct, allowing significant pain relief while reducing reliance on systemic medications.

Conclusions

Chronic pelvic pain is a complex and challenging condition requiring a multimodal treatment approach. This case demonstrates that topical AMI-KET cream may provide substantial relief and functional recovery in patients with CPP, particularly those unwilling to pursue opioids or interventional procedures. While long-term use was limited by tolerability, intermittent application maintained therapeutic benefit. Further studies are needed to clarify safety, efficacy, and optimal use of compounded AMI-KET cream in CPP management.

References

