A Novel Fluoroscopy-Guided Technique for Nervus Intermedius Block

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Introduction



Nervus intermedius neuralgia (NIN), also known as geniculate neuralgia or Hunt's neuralgia, is classically described as paroxysmal, severe, deep pain in the sensory distribution of the nervus intermedius, within the ear canal.



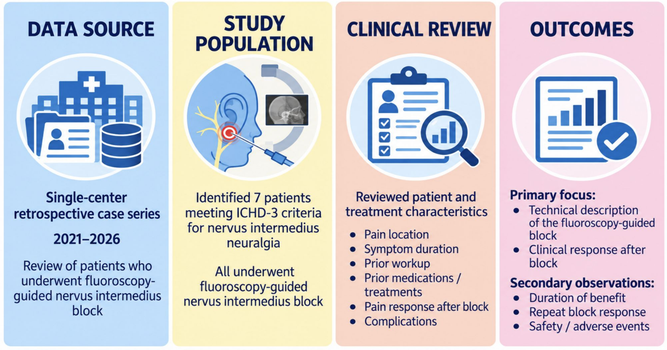
First-line treatment typically includes antiepileptic and other neuropathic pain medications; however, these therapies may be insufficient or poorly tolerated in patients with refractory symptoms.



A nervus intermedius block may provide both diagnostic and therapeutic value as an intermediate option between medical therapy and surgery, but there is very limited published literature on the technique, particularly for fluoroscopy-guided approaches.

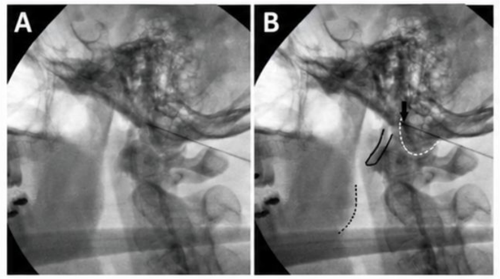
In this retrospective case series, we sought to describe a fluoroscopy-guided nervus intermedius block technique and characterize its clinical outcomes and safety in patients with refractory nervus intermedius neuralgia.

Methods



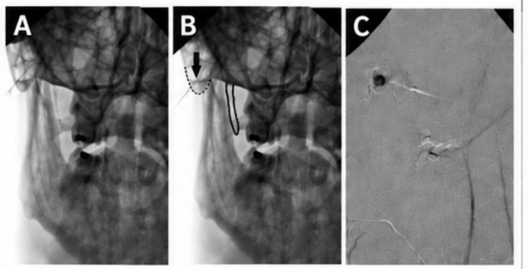
Results

Figure 1. Lateral fluoroscopic images.



(A) Lateral fluoroscopic image. **(B)** Annotated lateral fluoroscopic image. The arrow indicates the needle tip. The white dashed line represents the anterior border of the mastoid process in the lateral view. The solid black lines delineate the borders of the styloid process in the lateral view. The black dotted line outlines the angle of the mandible.

Figure 2. AP fluoroscopic images and digital subtraction angiography.



(A) AP fluoroscopic image. **(B)** Annotated AP fluoroscopic image. The black arrow indicates the needle tip in AP view at the anterior surface of the mastoid process and the midpoint of its anterior diameter. The dotted black line outlines the perimeter of the mastoid process in AP view. The solid black line delineates the borders of the styloid process in AP view. **(C)** Digital subtraction angiography (DSA) following contrast injection demonstrates localized contrast collection at the needle tip in the region of the nervus intermedius, without evidence of vascular uptake or intramuscular spread.

Patient Characteristics

Pt	Age/Sex	Response to NI Block	Repeat Block
1	50 M	100% for several days, 50% for 3 weeks	Yes
2	54 F	100% for 6 weeks	Yes
3	34 F	100% for 2 days	No
4	44 F	No benefit	No
5	83 M	100% for 6 days	No
6	42 F	No benefit	No
7	74 M	> 6 months of significant relief	No

Conclusions

- Fluoroscopy-guided nervus intermedius block provided pain relief in 5 of 7 patients, with benefit ranging from 2 days to 6 months.
- Three patients experienced significant relief lasting at least 3 weeks, and two patients had repeat blocks with similar benefit.
- No procedural complications or adverse effects were observed, suggesting that fluoroscopy-guided nervus intermedius block may be a useful minimally invasive option for refractory nervus intermedius neuralgia.

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