

# Gabapentin Effective for Treating Pain in a Pediatric Patient with Primary Erythromelalgia

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## INTRODUCTION

- Erythromelalgia is a rare neuropathy characterized by red, hot, painful extremities.
- The disease often goes unrecognized for long periods of time (mean of 5 years).
- Can be associated with significant morbidity and mortality in the pediatric patient population, including suicide.
- Treatment for pain due to primary erythromelalgia is largely unsatisfactory and highly individualized.
- A variety of proposed pathophysiologic mechanisms are responsible for the disease process.
- Most common medications used in to treat in children: aspirin, sodium channel blockers, vasodilators, beta blockers, anticonvulsants, antidepressants.
- Many patients are refractory to the traditional pharmacotherapy used and pain relief is not predictable with invasive interventional options (sympathectomy from regional or epidural anesthesia, intrathecal pumps).

## IMAGES

Function	Patients, No. (%) (N = 32)
Physical activity	
Not affected/no limitations	11 (34)
Moderately affected/physical activity limited	13 (40)
Severely affected/intolerant of physical activity	4 (13)
Wheelchair-bound	4 (13)
Schooling	
Regular attendance	21 (66)
Numerous absences	4 (13)
Not attending school	3 (9)
Homeschooled because of condition	4 (13)
Mental health	
Not affected	23 (72)
Affected	9 (28)
Depression only	3 (9)
Anxiety only	1 (3)
Behavior problems only	2 (6)
Anxiety and depression	2 (6)
Depression and behavior problems	1 (3)



Figure 1: Patient's hands during initial clinic visit

## CASE DESCRIPTION

- A previously healthy 12-year-old female presented to the pediatric pain clinic with a complaint of bilateral hand and foot pain.
- Pain was progressively worsening over two years with recent involvement of feet.
- Any type of strenuous activity could trigger symptoms.
- Pain was described as burning/tingling in nature with a glove and stocking distribution, excluding the soles of the feet.
- Acetaminophen and ibuprofen were ineffective.
- Immersing her hands and feet in cold water would alleviate almost all of her symptoms.
- Physical exam revealed erythematous hands and mild mottling of the lower extremities.
- Pain and erythema were reproducible when her hands were placed under warm water in the clinic sink, with her hands developing a sustained five-degree temperature elevation.
- Labs to evaluate for potential secondary causes unremarkable.
- Immediately started on aspirin 81 mg daily and gabapentin 200mg at night, then 200mg twice daily after one week.
- Tolerated medication regimen well with no adverse side effects.
- Upon follow-up one month later, patient reported significant functional improvement and minimal pain, as well as fewer symptoms while playing sports.

## DISCUSSION

- Erythromelalgia is a rare clinical syndrome in the pediatric patient population associated with significant morbidity and mortality.
- A reliable and safe treatment has not been determined.
- Gabapentin has been used successfully for treatment of various neuropathies.
- Although there is limited evidence regarding the efficacy of gabapentin for the treatment of erythromelalgia in children, we felt a trial was indicated due to the drugs well-established safety profile and minimal adverse side effects.
- The patient's marked improvement in symptoms suggests a potential role for gabapentin as a first line treatment option for pediatric patients presenting with signs and symptoms of primary erythromelalgia.

## REFERENCES

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Table 1: Functional assessment of study patients (2)