

## Trigeminal Neuralgia - A Discovery in Pain Reduction

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Trigeminal neuralgia (TN) is familiar to dental professionals as an intractable problem. Present drug treatments are frequently inadequate and have unpleasant side-effects.

A recent chance finding by a TN sufferer has been tested by volunteers and has been found to have great promise of almost complete alleviation of the pain without the use of conventional medication. It is brought to the notice of readers of this journal as an important potential treatment.

### Introduction

A small charity (Parkinson's Improvement Programme) has pioneered the use of ascorbyl palmitate (aka E-304 or palmitoyl ascorbate) (Changsha-Huir Biological Tech Co), a lipid soluble ester of ascorbic acid, in the treatment of Parkinson's since 2007.

Ascorbyl palmitate is a safe food additive (LD-50 3000 mg/kg) widely used in the food industry because of its powerful anti-oxidant properties. In combination with some oils and other food additives it has proved to be effective for some users in reducing or reversing some Parkinson's symptoms. Despite having symptom altering properties it has been passed by the MHRA as not a drug but a borderline substance for an NHS clinical trial which is currently seeking funding and leadership.

In the course of this work it was suggested that the beneficial effects of ascorbyl palmitate might extend to improvement for chronic inflammation induced conditions such as Alzheimer's and rheumatoid arthritis.

### Discovery

A 47-year-old female TN sufferer had recurrent right sided stabbing facial pain and paraesthesia which proved not to be controlled with tegretol or with gabapentin over a period of some weeks. Her MRI scan was clear and no apparent cause could be found. Knowing of the work with ascorbyl palmitate she elected to take a heaped teaspoonful of the powder (approx. 1.5 gm) and a teaspoonful (approx. 5 ml) of fish oil (Lemon fish oil Higher Nature Ltd) daily both being stirred into a commercially available fruit yoghurt. At that time the patient was taking gabapentin as prescribed by her medical practitioner.

### Results

The outcome of taking the ascorbyl palmitate (AP) was relief of paraesthesia and pain within a few hours. It was described as being like recovery from a dental local anaesthetic. The relief lasted some eight hours and a second intake of AP provided a good night's sleep.

Since that outcome this patient continued with a daily intake of AP (but ceased to take gabapentin) for the next 18 months. At this stage the daily intake of AP was discontinued and the pain did not return for several weeks and then at a reduced intensity and over much shorter periods of time. AP has since been used intermittently as required without any other medication. It has been noticed that stress is a trigger. This patient was being treated with long-term levothyroxine 150 microgm / day. Failure to take this for 48 hours resulted in

return of the TN symptoms of pain and paraesthesia which ceased on resuming the medication. This possible connection requires follow-up in other TN cases.

As a result of this chance finding other cases have been offered the same AP treatment regime with positive outcomes.

### Case histories

Consent to publish anonymous detail has been obtained from all.

1. Female, 47, bilateral TN diagnosed 02/2014 triggered by cold wind, rain. History of shingles 01/2014 and 07/2014

Her medical practitioner prescribed Pregabalin 150 mg 3x daily and paracetamol as required which did not relieve the pain.

Commenced AP / fish oil 07/14 – gradually obtained relief over a week then found triggers no longer brought on pain; occasional short pain episodes since; has continued medication. This patient maintained a one month food intake and pain diary which suggested cheese products might increase short pain episodes. She is now pain free most days.

2. Male, 80, edentulous, TN diagnosed 04/2013 triggered by chewing and swallowing. History of high BP, peripheral neuropathy, dyspepsia.

Consultant neurologist prescribed Carbamazepine 200 mg 4x daily for TN. The patient was also on other medications.

Commenced AP / fish oil 05/2014 – partial relief in a few days, total relief obtained in three weeks and able to eat and swallow freely. He continued medication and using the AP.

In February 2015, he was hospitalised for complete washout of all medications and at this time he was stopped from using the AP/fish oil. After four weeks, he had lost 10kg in weight because the triggers for his TN were chewing and swallowing and thus eating was very painful. After release from hospital on no medication he resumed AP/fish oil and was pain free after two days and able to resume normal eating. He remains pain free to date.

3. Female, TN diagnosed 2004, multiple triggers. History of Bell's palsy 2002, Shingles 2002, R knee replacement 2014.

Commenced AP / fish oil 07/2014 – relief obtained and has continued using AP. No other medication.

4. Female, 72, TN diagnosed 01/2013 various triggers. History of anxiety, IBS, cervical carcinoma 2004.  
Prescribed Gabapentin and diazepam 5mg as required

Commenced AP / fish oil 04/2013 – relief in a few days. Has used intermittently as required since. Continues on diazepam also.

5. Female, 48, TN diagnosed 2013, strong perfumes, dehydration, tiredness or alcohol intake triggers. No relevant medical history.

Commenced AP / fish oil 01/2014 and obtained rapid relief with no pain after a few days. Now only uses AP / fish oil if pain recurs.

6. Female, 41, TN diagnosed 11/2014, trigger not defined but has chronic bruxism with soft plastic occlusal cover nocte. No relevant medical history.

Prescribed carbamazepine 1200 mg daily changed to gabapentin.

Started AP / fish oil 02/2015 pain relieved in a few days and remains controlled. Has tried stopping AP / fish oil but still on gabapentin and pain is not controlled. Restarting AP / fish oil relieved pain.

7. Female, 75, TN diagnosed ~30 years ago, listed for surgery to relieve. Treated with Gabapentin, tramadol, amitriptyline, paracetamol. Still in pain.

Commenced AP/fish oil 03/2016 and found rapid complete relief of pain which has continued. Surgery has been cancelled. Is not now in need of other medications which have been gradually discontinued.

The experience of the initial patient over three years has been that the fish oil is not an essential part of the treatment which appears to work well without it.

AP is lipid soluble and the fish oil aids mixing into the yoghurt [1-4].

### Conclusion

These histories suggest that ascorbyl palmitate may provide an inexpensive, safe, oral treatment for an otherwise often intractable condition.

In all the quoted cases, full consent was obtained for anonymised publication. All were diagnosed and initially treated by their consultants or general practitioners and self-referred to this programme with the diagnosis assumed to be correct.

### Conflict of Interest

The author declares no conflict of interests.

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