

# **Sedatelec Premio 32**

## **3 Case Reports**

*Dr. med. Volkmar Kreisel, Clinic for Integrative Medicine  
Bahnhofsplatz 174321 Bietigheim-Bissingen Germany*

Abstract : 3 case reports of the use of photobiomodulation by Laser are explained, to show how easy, unpainful and efficient in this technique into the therapeutical day-to-day routine. To make its application successfully it is necessary to exceed the minimal responder dose of each trigger point. It is also recommendable to start initially with 2-3 treatment sessions per week.

The Sedatelec Premio 32 is a low intensity laserpen used for non invasive photobiomodulatory stimulation of trigger and acu points. The emitted infrared wavelength of 905 nm is highly efficient in penetrating through the skin up into deeper tissue layers. The laser beam is pulsed with an energy of 3,57 µJ per pulse, in total 1 J/30 sec. An irradiation time of 30 - 60 sec per point is recommended. The Pulsed Modes base upon the Nogier frequencies A (2,28 Hz), B (4,56 Hz), C (9,12 Hz), D (18,25 Hz), E (36,5 Hz), F (73,00 Hz) and G (146 Hz). The Premio 32 offers four different treatment programs each featuring a defined combination of Nogier frequencies and named after its therapeutic benefit. So program "Analgesia" is focused on the frequencies E and G, program "Regeneration" on the frequencies A, B and F, program "Relaxation" on the frequencies C, D and G and at last program "Universal" includes all Nogier frequencies A to G.

On the one hand the Premio 32 can be used as a sole therapy tool but also together with other established treatment methods as physical therapy or needle acupuncture. The following case reports point out some applications in pain management.

### **1. Case report: N.E., 51 years, Diagnosis: Cluster headache, cervical syndrome**

The female patient suffers from chronic cluster headache for more than 10 years. Usually there were two pain attacks per week on the right temporo-frontal side that last for about five hours. The symptoms were triggered by recurrent cervical pain attacks and muscular tension. All cerebral imaging diagnostics were normal. Pharmacological therapy included NSAIDs as ibuprofen and triptans. Under this medication the pain level could be reduced from VAS (Visual Analogue Scale) 8-9 to VAS 5-6, but still persisting with two attacks weekly since three years. The patient came to our clinic in order to get some more pain relief.

The treatment concept was to support the current therapy synergistically. Cervical trigger points and ear acu point areas were stimulated with the Premio 32 using the program "Analgesia". The treated cervical trigger points were located C1-C5 paravertebral both sides, in total 8 trigger points. Each point was irradiated for 60 sec (2 J/point) with close skin contact. Following there was a stimulation of different areas of both auricles: the area of the cervical spine, the thalamus and the area of the os frontale. Furthermore point

zero was treated on the right side and point zero retroauricular on the left side. So there were in total 4 points respectively areas on both auricles, each of which was irradiated for 30 sec (1 J/point). We started with two laser sessions per week. Current medication was retained.

After three weeks the patient reported a slight improvement of the pain attacks to VAS 4-5 and a shortening of the pain attack to four hours. After ten weeks (20 treatments) there was a clear improvement with a VAS 3-4 and only one pain attack per week. At this point we reduced the treatment frequency to one treatment per week. For the next seven weeks we find a further stabilisation of the symptoms with one pain attack within 10 days that last for about three hours with VAS 3. Meanwhile (after in total 36 treatment sessions) the patient is treated one time every three to four weeks. The severe pain attacks are markedly reduced to a stable level with one pain attack VAS 3 within 14 days. The patient is very satisfied with this result and can live very well with that. She wants to continue the treatment.

**2. Case report: M.E., 55 years,  
Diagnosis: Chronic lumbalgia after  
disc surgery**

The male patient came to our clinic because of chronic lumbalgia after disc prolapse L4/5 and surgery three years earlier. There was a complete recovery of paresthesia and also a pain relief after surgery, but some permanent lumbar pain radiating into his right leg still remained. However, further surgical intervention was not indicated by the current MRI findings. NSAIDs as ibuprofen and metamizole could reduce the pain to VAS 3-4, but the patient was not satisfied with this result.

The treatment concept was to stimulate lumbar trigger points and ear acu points with the Premio 32. The lumbar scar was

located median from L3-5. The treatment protocol started with a laser irradiation of this area for 150 sec (5J/scar) with program "Regeneration" followed by a laser stimulation of paravertebral points L3-5 both sides with program "Analgesia", in total 4 trigger points. Each point was irradiated for 60 sec (2 J/point) with close skin contact. Afterwards there was a treatment of both auricles with program "Analgesia": the area of the lumbar spine both frontal and retroauricular, the thalamus and the intertragic endocrine zone. So there were in total 4 points respectively areas on both auricles, each of which was irradiated for 30 sec (1 J/point). We started with two laser sessions per week. Current medication was retained.

After two weeks (4 sessions) the patient reported a first improvement of the lumbar pain. The pain felt a little bit different and smoother. Two weeks later (8 sessions) he reported a clear reduction of the pain to VAS 2-3. Furthermore it was no more as sharp as it was initially. Treatment was continued and simultaneously the patient reduced NSAIDs step by step. After 12 treatment sessions the pain level was VAS 2 with the half dose of NSAIDs. Thereupon we reduced treatment frequency to one per week to stabilise the situation. The treatment series was finished after another four weeks (in total 16 sessions). The permanent pain was reduced to VAS 1-2 with the half dose of the initial medication. The patient is very satisfied with this result. If the pain would worsen again he would like to do another treatment series.

**3. Case report: M.H., 61 years,  
Diagnosis: Migraine**

The female patient suffers from migraine since her youth. From time to time she had to undergo different neurological diagnostics including cerebral MRI but all medical checks were without any severe

findings. For about 25 years migraine attacks were very few and she needed no medication. However, the situation worsened since five years. When she came to the clinic she reported 3-4 migraine attacks per month with aura and impaired vision for 30 min. Each attack lasted for one to two days with headache on the right side and a VAS of 6-7. Triptans could stop the main attacks, but mostly some pulsating headache and dizziness remained for two days. The patient felt severely interfered with her daily life.

The goal of the treatment was to reduce pain attacks and the intake of triptans. The treatment protocol included laser irradiation of both cervical and occipital areas and ear acu points with the Premio 32 using the program "Analgesia". The cervical trigger points were located C0-C3 paravertebral both sides, in total 6 trigger points. Afterwards another two trigger points located on the right occiput in the course of gall bladder meridian were treated. Each of these points was irradiated for 60 sec (2 J/point) with close skin contact. Following there was a stimulation of different areas of both auricles: the area of the upper cervical spine, the thalamus, the Omega main point and the Psychotherapy point (Bourdiol). Furthermore point zero was treated on the right side and point zero retroauricular on the left side. So there were in total 5 points respectively areas on both auricles, each of which was irradiated for 30 sec (1 J/point). We started with two laser sessions per week. Current medication with triptans was retained.

After seven weeks (14 treatments) the patient reported a decrease of the migraine attacks to 3 per month, each lasting just for one day. Also dizziness and

pain level were reduced to VAS 5. These improvements continued for the following weeks. After twelve weeks (24 treatments) there were 2-3 migraine attacks per month, each lasting one day with a remarkable reduction of the pulsating pain to VAS 3. At this point we reduced treatment frequency to one treatment session per week. However, the stabilisation continued. After twenty weeks (32 treatments) there were 2 migraine attacks per month, but often they were only with a slight aura and reduced headache of VAS 2-3. The patient started to dispense with triptans while treatment sessions were continued one per week. Currently the patient has received 41 treatments. Since treatment No. 36 the frequency is reduced to one treatment per 14 days and now it is planned to change it into one treatment per month. From experience this is recommendable to keep migraine stable. At this moment the patient notes 1-2 migraine attacks per month with VAS 2, lasting not more than one day without any medication of triptans. She is really satisfied with this result.

### **Conclusions**

The Sedatelec Premio 32 is a therapeutic tool that can be easily used to implement low intensity laser therapy into the therapeutical day-to-day routine. To make its application successfully it is necessary to exceed the minimal responder dose of each trigger point (1,0-4,0 J/cm<sup>2</sup>) and acu point (0,5-1,0 J/cm<sup>2</sup>). It is also recommendable to start initially with 2-3 treatment sessions per week. Especially chronic pain syndromes benefit from a continuous therapy for several weeks or months and a step by step reduction of treatment frequency. Considering this from my experience the improvement and stabilisation in pain relief are persistent.

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**Chemin des Mûriers  
69540 Irigny – France  
Tel : +.33 (0)4 72 66 33 22  
Fax : +33 (0)4 78 50 89 03  
[www.sedatelec.com](http://www.sedatelec.com)**

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