

104. THE USEFULNESS OF PAIN GONE® PAIN KILLING PEN FOR SELF-TREATMENT OF CHRONIC MUSCULO-SKELETAL PAIN – A PILOT TRIAL

Dr. Tzvetanka Ivanova-Stoilova, MD, PhD, FRCA, Consultant Anaesthetist, Royal Gwent Hospital, Newport, S.Wales

Dr. David Howells, MB, FRCA, SpR anaesthetics, Royal Gwent Hospital, Newport, S.Wales

Introduction: Pain Gone® is a new piece of equipment designed for self-treatment of pain from the body surface, originally developed in Denmark and available in the UK since 1999. It is a plastic unit the size of a big pen. Electronics and microcrystals are placed inside and on pressure on the top of the pen a high voltage (15,000V), low frequency 1-2 Hz and low potency (0,000006 amp) electrical current is delivered to the treatment area. The therapeutic zaps can be applied through light clothing. A single unit can last for 2-3 years. To date we are not aware of published studies on the device.

Aim: To evaluate the usefulness of the new device - Pain Gone® painkilling pen in alleviating chronic musculo-skeletal pain by self-treatment.

Materials and Methods: We enrolled 36 patients with chronic musculo-skeletal pain (shoulder, knee, elbow, low back pain, coccydynia, cervical spondylosis, trigger point syndrome pain). They were instructed to apply 10-15 zaps with the pen around the painful body area. This could be repeated several times a day until satisfactory pain relief is achieved or sustained. The pen was used for a period of 14 days.

Its usefulness was evaluated by comparing the pre- and post-treatment variables: VAS, mobility, quality of life, amount of pain relief medication. The patients were asked to assess its convenience to use at home and while travelling, express their overall satisfaction and willingness to try to get it again by filling a questionnaire at the end of the trial.

Results: 61% (22 patients) were satisfied and 39% (14 patients) were dissatisfied with the device. The two outcome groups of patients who did not differ in their pre-treatment VAS scores, mobility or quality of life.

The patients that benefited from the pen reported a mean reduction of pain severity by 33% (ranging from 20-85%); 10 patients (45%) had improvement in mobility, 8 patients (36%) reduced their analgesic medication. They all found the device easy to use, convenient for travel and were willing to try it again. 6 months later 73% of them had purchased the pen and were using it as a rescue treatment.

Patients dissatisfied with the device did not obtain pain relief. 4 Patients (28%) found it difficult to use, but 5 patients (35%) wished to try it again. 6 months later none of them had been using the pen.

Discussion: The mechanism of the analgesic action of Pain Gone might be similar to neuromodulatory effect of TENS. Pain Gone® does not require application of gels, pads and wires and there are no on-going costs. Our trial with the device showed that it is well accepted by patients and it is a useful adjuvant for medication-free self-treatment of chronic pain. A placebo effect cannot be ruled out.

Conclusions: More studies are needed to elucidate the full potential of the device and types of pain most likely to respond to treatment with Pain Gone®. A double blind randomised controlled trial appears to be justified.

Acknowledgement: We thank UK Care Products for the supply of the pens for the trial.

The Usefulness of PainGone® Pain Killing Pen for Self Treatment of Musculoskeletal pain – A Pilot Trial

Dr. Tzvetanka Ivanova-Stoilova, MD, PhD, FRCA, Consultant Anaesthetist, Dr. David Howells, MB, FRCA, SpR anaesthetics, Royal Gwent Hospital, Newport, South Wales

Aim

- To evaluate the usefulness of the new device Pain Gone® painkilling pen in alleviating chronic musculo-skeletal pain by self-treatment

Introduction

- Originally designed in Denmark Pain Gone® painkilling pen is a new piece of equipment for self treatment of pain from the body surface.
- It is a sealed plastic unit the size of a big pen inside which are electronics and crystals.
- A high voltage 15,000 volt low frequency 1-2 Hz and low potency 6.10^{-6} amp electrical current is delivered on pressure applied to the top of the pen.
- The device can be applied on bare skin or through light clothing.
- A single unit can last for 2-3 years / 100,000 zaps.
- No pads, gels batteries or on-going costs.



Materials and Methods

- Included 36 patients with chronic musculo-skeletal pain – shoulder, knee, elbow, low back pain, coccydynia, cervical spondylosis, trigger point syndrome.
- Excluded: pregnant, epileptic with pacemaker, senile dementia, skin infection and acute onset of new symptoms.
- Assessment by consultant.
- Device demonstrated to patient.
- Pre-treatment assessment of VAS, mobility, quality of life and medication.
- Device loaned for 14 day home trial.
- Post-treatment assessment form completed by patient - VAS, mobility, ease of use and convenience of use while travelling.
- 6 months follow up.

Acknowledgement

- We thank UK Care Products for the supply of the pens for the trial.

Protocol

- First, 3 zaps to both Li 4 acupuncture points.
- Painful area to be zapped 5 – 10 times.
- Session to be repeated as frequently as necessary at 5 minute intervals.



Results

- VAS – mean of 7.3
- Quality of life - good: 47% (17) poor: 53% (19)
- Mobility good: 47% (17) poor: 52% (19)

Patients' Evaluation

Satisfied with PainGone®	Dissatisfied with PainGone
61% (22 patients)	39% (14 patients)
VAS reduction by mean of 33% (20 – 85%).	No reduction of VAS.
Easy to use.	In 5 (35%) pain is worse.
Convenient.	Not easy 4 (28%).
Less medication.	Not convenient 1 (7%).
Would like to buy.	Same medication.
	Would like to try again 5 (35%).

6 months Follow-up

- 16 patients (73%) of the satisfied had purchased a pen and are using it as rescue treatment.
- None of the initially dissatisfied had purchased or used it again.

Discussion

- Mechanism of action of PainGone® is believed to be similar to TENS.
- We consider the possibility of “needless” acupuncture effect as well.
- A placebo effect cannot be ruled out.
- To our knowledge this is the first clinical trial in the UK.
- Price of a single unit on the UK market: £59 - £69.

Conclusion

- PainGone® pain killing pen is a safe, easy to use, medication free pain controlling device which can be used for self-treatment.
- A randomised controlled trial seems to be justified to confirm the findings of this study.