Report on clinical investigations of Singlet Oxygen Therapy Valkion unit\(^1\) use in sanitarium practice at Chernobyl zone in Ukraine

\(^1\) The activation chamber employed in Valkion units were manufactured by Jörg Klemm, head of R&D for SOE Health Ltd.
Introduction
Singlet Oxygen Therapy is widely practiced among the new perspective methods of non-medicamental treatment and prophylactics of diseases.

Principle of SOT effect is based on optimisation of singlet oxygen energy formation in an activation chamber of Valkion unit and its delivery into a human body.

Normalisation of the patients health condition after SOT was caused by improvement of blood circulation, stimulation of metabolism in tissues, immunity strengthening, detoxification, normalisation of antioxidant state. To put SOT into practice, modern Valkion unit was set in dispensary “Teteriv”, Korostyshivsky district of Zhytomyr region where the above mentioned investigations have been fulfilled since the 1st of July 1997 till the 23rd of February 1999.

Research Object and Task
The aim of our investigation was to determinate SOT influence on health condition of patients in sanitarium and possibilities and perspectives of SOT use for the treatment and rehabilitation of patients with different types of pathologies. To fulfil the purpose the following tasks were set:

- study the effectiveness of SOT use in clinical practice based on treatment results of the patients with different types of diseases
- organise the comparative characteristics of SOT effectiveness among the patients who received SOT in complex with other types of treatment and those who didn’t receive SOT at all
- make the conclusion of SOT effectiveness and use perspectives in sanitarium practice on the basis of clinical and laboratory data

Materials and methods of investigation
967 children (aged 6-15) from the region polluted by radiation were treated by means of SOT in dispensary Teteriv (Table no. 1).

The experimental persons were divided into 2 groups. In the first group there were 455 children, who underwent complex treatment (SOT in complex with traditional treatment at the same time). Among them: 57,4% suffered from diseases of blood circulation system, 24,6% from respiratory tract pathologies.

There was following percentage according to the level of affection: Light 54,2% / Middle-hard 42,3% / Hard 3,5%
The second (control) group consisted of 512 children, who were treated only by means of traditional treatment. The overwhelming majority of patients suffered from blood circulation system diseases (59.0%) and respiratory tract diseases (24.6%). 55.7% of children had light level of affection, 39.6% middle hard, 4.7% hard.

In most cases the patients with cardio-vascular system pathologies suffered from the following diseases:

- functional cardiopathy
- vegetovascular dystonia

Among gastrointestinal tract diseases prevailed:

- chronic gastritis
- gastro-duodenitis
- cholecystitis
- dyskinesia of bile duct

Among respiratory tract diseases predominated:

- chronic and obstructive bronchitis
- bronchial asthma

Among metabolism pathologies prevailed:

- endocrine system diseases including sugar diabetes (of light and middle hard form)

Among motor system diseases prevailed:

- after-traumatic bones and joints injury

Among skin diseases prevailed:

- eczema
- neurodermatitis

For the investigation of SOT effectiveness different data was studied: data of electrocardiogram, indices of coagulogram, haemoglobin level, sugar in blood (prothrombin index, fibrinogen), the patients tolerance to physical load was also taken into consideration.

The possible side effect was evaluated by means of the following symptoms:
- appearance of pain of different localisation, which didn’t bother patient before
- intensification of disease symptoms which patient had before SOT
- appearance of intensification of neurological stage
- worsening of clinic-functional and laboratory indices (if they were not caused by medicament therapy)

The treatment by means of SOT consisted of activated water use and activated air inhalation. Patients received SOT 1 time a day on average. During the first day of treatment patients consumed 50-100 ml of activated water and 3-9 minutes of inhalation by activated air. The second and all the following days patients took 150-200 ml of activated water and 6-14 minutes of inhalation. Each patient received 11 SOT treatments on average.

The duration of the treatment in the first group lasted 10 days on average, in the control group 12 days.

**Results of the Investigation**

When using SOT in complex with other types of treatment (Table 1.), all the children (455 persons) finished their course of treatment with improvement of their condition. In the control group only 451 out of 512 children (88,10%) finished their treatment with improvement, 58 patients (11,32%) left without changes, 3 patients aggravated their stage.

When treating the patients with blood circulation system diseases, it was noted that general effectiveness of SOT use in the first group amounted to 100%.

The effectiveness of SOT by the patients with blood circulation system pathologies was caused by improvement of electrocardiogram indices, increase in patient’s tolerance to the physical load, disappearance of heartache and tachycardia, increase in haemoglobin level in blood. SOT effectiveness in the control group amounted to 91,06%. Out of 302 children 275 persons felt better, 25 patients’ health condition didn’t change, 2 children finished their course of treatment with aggravation.

The SOT applied to 112 children suffering from respiratory tract diseases showed considerable effectiveness.

There were several changes for the better which were observed by all the patients: disappearance of catarrhal phenomenon, facilitation of expectoration, stabilisation of external breathing function, reduction of short breath and quantity of choke attacks by the patients who suffered from branchial asthma. The treatment effectiveness of the patients from the control group was 84,13%: out of 126
children 106 improved their health, 19 children (15,1%) finished the course of treatment without changes, 1 child' health condition aggravated.

The effectiveness of SOT applied to 31 children with gastrointestinal tract diseases was characterised by the remarkable improvement of the health condition of all patients. After SOT treatment patients' health condition improved, pains in stomach disappeared, general state and appetite improved, meteorism disappeared, heartburn reduced, stool normalised. The SOT effectiveness in the control group amounted to 70,97%, 9 patients (29,09%) left without changes.

All the patients from the first group who had metabolism pathologies finished their course of treatment with improvement of their health condition. There were the following changes in the health condition of the patients: disappearance of thirst and dryness in mouth, tiredness, reduction of sugar in blood by the patients who suffered from sugar diabetes, and loss of weight in case of obesity. By comparison, in the control group 85,71% of patients improved their health.

There was 100% effectiveness after SOT by the patients with nervous system diseases, in the control group 85,71% of patients became better.

The SOT effectiveness by the patients who suffered from skin and motor system diseases was high but didn't differ much from the results in the control group.

All the 16 persons who suffered from kidney and urinary tract diseases and to whom Singlet Oxygen Therapy in complex with other methods of treatment was applied changed their health condition for better, in the control group 91,67% of patients improved their health.

Analysis on the results of SOT use applied to the children lining in the territory polluted after the accident at Chernobyl Atomic Power Station and treating in the dispensary Teteriv showed considerable treatment effectiveness. Practically 100% of patients felt disappearance of headache and also pain in joints and in chest region, improvement of general condition, increase in weight, disappearance of nasal bleeding and catarrhal phenomenon in gullet, normalisation of blood composition and decrease in caesium-137 level.

Inferences:

1. Research work on Singlet Oxygen Therapy use in sanitarium practice of dispensary Teteriv shows a remarkable effectiveness for the patients who underwent SOT in complex with other methods of treatment.

2. Effectiveness of SOT in the first group (SOT in complex with traditional treatment) was 11,9% higher by comparison with the control group.

3. Analysis on the results of the clinic research shows expediency and profit of SOT use in sanitarium practice of Ukraine treating the children with different types of pathologies from the ecologically unfavourable regions and areas polluted by radiation.
First Vice President of the Ukrainian National Association of Physiotherapists and Balneologist,
Vice Head of the Board
Head of the Medical department
"Ukrprozorovnytsa" JSC
MD Honoured Doctor of Ukraine
V. Kolesnyk

For more information please visit our website or contact us:

www.soehealth.com  info@soehealth.com
Table 1

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<th>Without Change</th>
<th>With Aggravation</th>
<th>Treatment Effectiveness %</th>
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<th>Treatment Effectiveness %</th>
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