COMPLEX REHABILITATION AMELIORATES QUALITY OF LIFE OF PATIENTS WITH BARRÉ-LIEOU SYNDROME

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INTRODUCTION

In 1925 a French neurologist Jean Alexandre Barre, and in 1928 a Chineese doctor Yong-Choen Lieou, independently one from the other, described a syndrome including a lot of symptoms – consequences of the dysfunction of the posterior cervical sympathetic chain [4].

According to *www.wrongdiagnosis.com*, the posterior cervical sympathetic syndrome known as Barre Lieou syndrome (BL-S) is summarized as "a rare condition where trauma (such as pinching by adjacent vertebrae or arthritis) to the sympathetic nerves located in the spinal area of the neck results in a variety of neurological symptoms." Also mentioned by *www.wrongdiagnosis.com*: "Barre Lieou syndrome is listed as a "rare disease" by the Office of Rare Diseases of the National Institutes of Health (NIH). This means that BL'S, or a subtype of BL'S, affects less than 200,000 people in the US population. [NIH] [15, 24].

According to *www.CaringMedical.com*, the symptoms that characterize BL-S are as follows: headache, facial pain, ear pain, vertigo, tinnitus, hoarseness, neck pain, severe fatigue, muscle weakness, sinus congestion, a sense of the eyeball being pulled out, numbness (including facial numbness), a pins-and-needles sensation of the hands and forearms, corneal sensitivity, dental pain (phantom pain), shoulder pain, lacrimation, swelling on one side of the face, nausea & vomiting, localized cyanosis of the face, blurred vision (associated with the headache); anxiety, chest pain, nystagmus, leg pain [4,23].

In clinical practice different drugs are applied (peroral, intramuscular, paravertebral infiltrations, local unguents). We decided to combine different natural and preformed physical modalities for improvement of the quality of life of patients [1,2,3,10,13,14,20,21,22].

AIM

The goal of current study is to evaluate the efficacy of the complex rehabilitation in patients with BL'S.

MATERIAL AND METHODS

In the years 2004-2009 a total of 27 patients (18 women & 9 men – fig.1, middle age 47,3 years, age distribution – fig.2) with BL's were observed during a 20 days treatment:

- *10 days like in-patients* in a Neurorehabilitation department of the University hospital in Pleven or of the National Specialized hospital of Physical therapy and Rehabilitation – Sofia;

and

- *10 days like out-patients* in a Medical Center (MC) – MC "Vitalis" in Sofia and MC"Pleven" in Pleven).

Fig.1. Distribution men : women

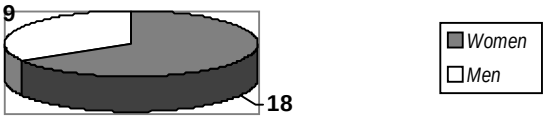
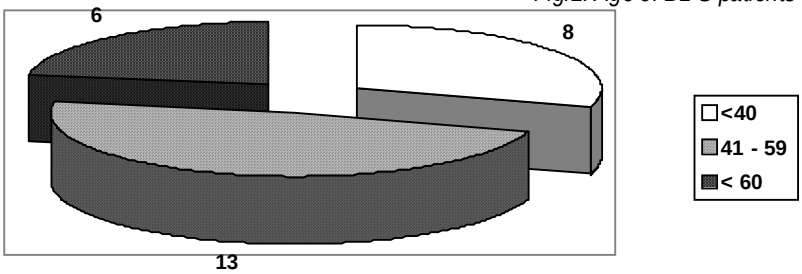


Fig.2. Age of BL-S patients



Our **REHABILITATION COMPLEX** includes:

- PHYSIOTHERAPY (KINESITHERAPY):
  - *Analytic exercices* for cervical paravertebral muscles,
  - *Relaxing massage* techniques,
  - *Post-isometric relaxation* of some muscles of the cervical region – v.gr.pars descendens of m.trapezius, m.sternocleidomastoideus,
  - *Mobilizations* in the cervical spine - predominantly at 0-C1 and C1-C2 levels (for atlanto-occipital and atlas-axis joints).
- PROCEDURES WITH PRE-FORMED PHYSICAL MODALITIES:
  - *Transcutaneous electro-neurostimulation (TENS)* – 10 min., 10 procedures, paravertebral localization of electrodes, with an electric device Intelect 2006 of Chatanooga (USA) [19];
  - *Low intensity low frequency magnetic field* – 204 Oe, 10 min., 10 procedures, with a device Magnit N80 (Bulgaria).

Patients were examined before therapy (B.Th.), during treatment, after therapy (A.Th.) and one month later, according a Protocol, including clinical patterns of BL's, psychometric tests and some investigations (neurofunctional tests, neuroimagery) [5,6,7,8,9,11,12,16].

Statistical analysis was performed by t-test (ANOVA) and Wilcoxon rank test.

RESULTS AND ANALYSIS

The comparative analysis of results demonstrates a statistically significant favorable effect on headache (fig.3), vertigo, tinnitus, neckpain (fig.4) [18], shoulder pain, numbness, nausea, stuffy nouse, fatigue, anxiety (fig.5). The effect remains stable one month after the end of treatment.

Fig.3. HEADACHE - Visual Analogue Scale of PAIN (VAS 0-20)

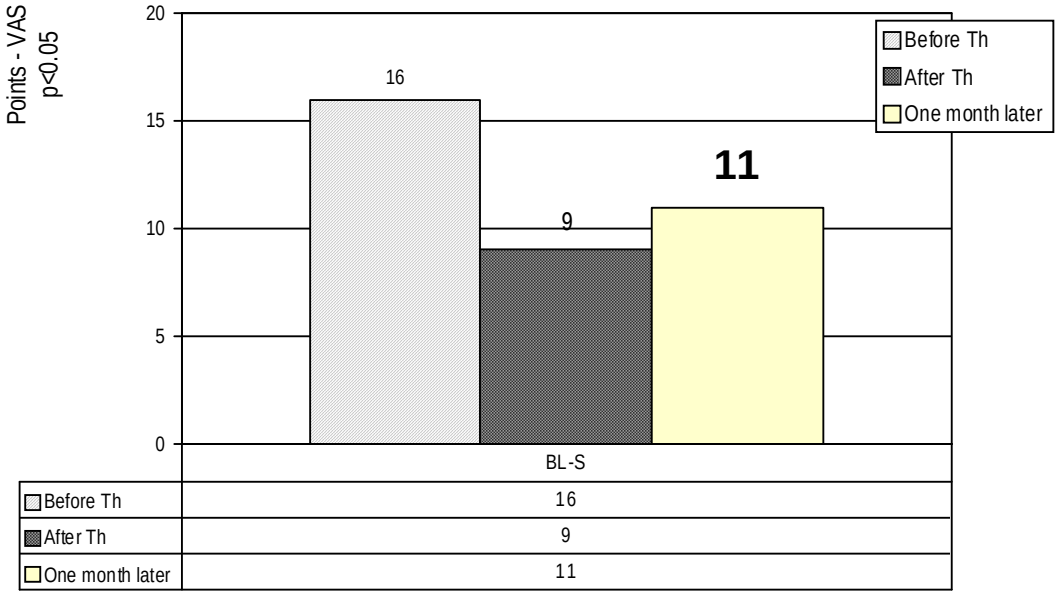


Fig.4. NECKPAIN - Visual Analogue Scale (VAS 0-20)

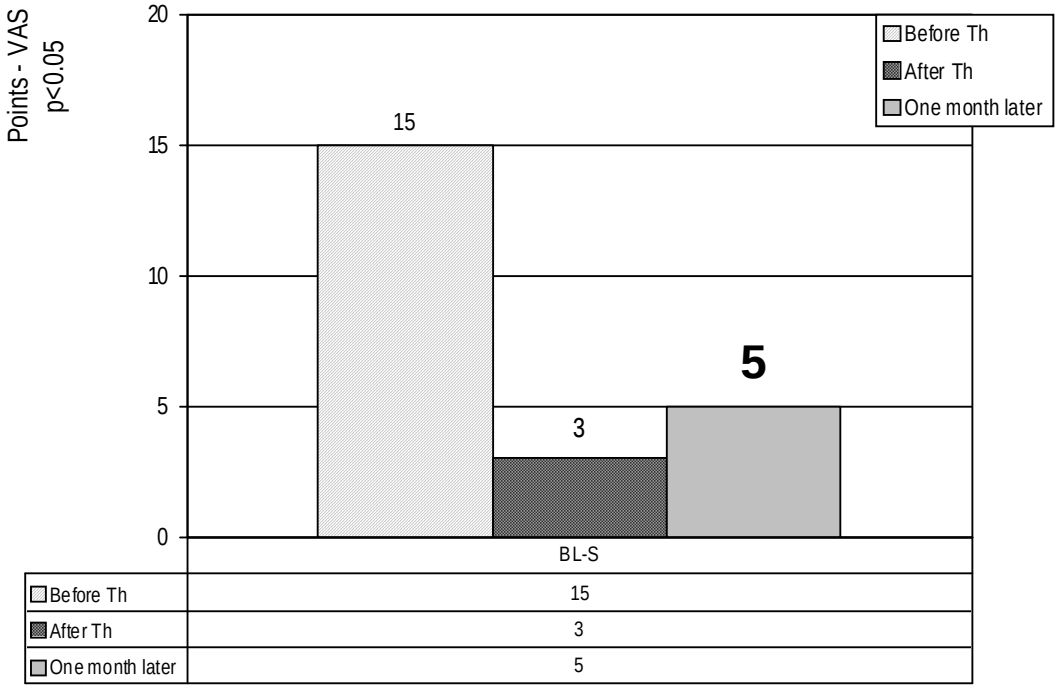
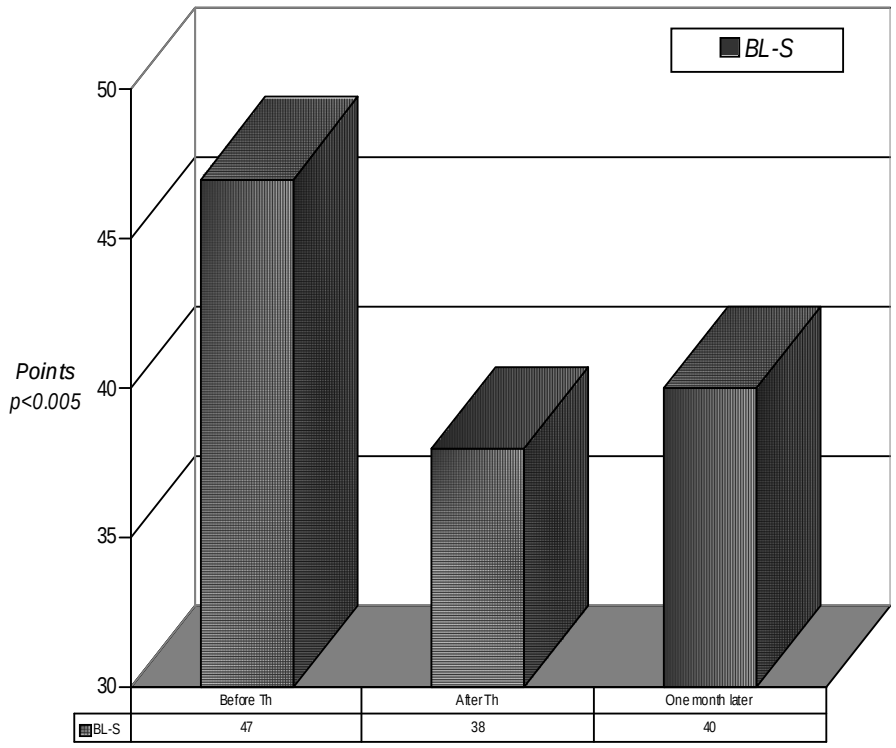


Fig.5. Zung - Anxiety



DISCUSSION AND CONCLUSION

The complex rehabilitation of Barre Lieou syndrome ameliorates quality of life of patients.

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