



## Oxygenate yourselves! -The Hyperbaric Centre Magazine

N. 27 – maggio e giugno 2016



In 2010 the Hyperbaric Centre of Ravenna started a new experience with the blog [www.iperbaricoravennablog.it](http://www.iperbaricoravennablog.it). The aim of the blog was to share the stories of the patients because we believe that the solution to the problem of one person is the solution to the problem of so many others. This experience led to "Oxygenate yourselves!", The blog magazine of the Ravenna Hyperbaric Centre. The magazine is a new tool to read and preserve the most widely read stories. This number contains the articles most-read in May and June 2016.

Enjoy the reading!

### Gigliola tackles interstitial cystitis with a multidisciplinary treatment



Gigliola is a sweet and nice lady of 37 years, originally from Catania, who moved to Ravenna 4 years ago. When we met her, she told us: "I started to suffer from interstitial cystitis more than a decade ago, but no doctor was able to do a correct diagnosis until 2012".

Interstitial cystitis, also called bladder pain syndrome, presents symptoms similar to bacterial cystitis, but it is a real chronic inflammation of the bladder that does not respond to conventional antibiotics therapy. The bladder pain syndrome entails great pain and limitations in everyday life. The causes of this disease are still unknown and it is often mistaken for a psychosomatic disorder linked to stressful situations. In reality, it is the constant pain, the resulting stress and the lack of diagnosis that can eventually lead to psychological disorders.

In January 2015, Gigliola come to know about the Hyperbaric Centre of Ravenna, thanks to the urologist that treats her in Pavia. She came to our Centre where Dr. Longobardi suggest that she follows a multidisciplinary therapy lead by a collaboration between the urologist, the homotoxicologist and our osteopath Marco Gaudenzi along with the hyperbaric chamber therapy.

Hyperbaric therapy includes several cycles. Gigliola started with 20 sessions, followed by other 15 sessions every three months. The hyperbaric oxygen therapy (HOT) started to give her relief from pain since the fifth session. Pain decrease significantly and the times she need to run to the bathroom are halved from 30 to 15 per day.

Finally Gigliola no longer feels the characteristic suprapubic pressure and constant urge to urinate typical of the pathology. She emphasized: "I never abandoned drug treatment. I was able to minimize the doses and suspend some of the drug therapy. Thanks to oxygen therapy I do not take painkillers anymore. The degree of pain was significantly lowered: from 7-8 to 4-5 in the first period and some days I have no pain at all!"

Gigliola also suffers from two diseases often related to interstitial cystitis, which cause excruciating pain and compromise quality of life: vulvar vestibulitis (better known as vulvodynia) and neuropathy of the pudendal nerve.

The first is a chronic inflammation of the tissues and the nerve endings of the vulvovaginal area. The second one has unknown origins. It might be caused by mechanical or inflammatory damage the pudendal, the nerve that, due to its location, innervates the entire genitourinary -rectal area.

Oxygen therapy provides benefits also for the treatment of these two related diseases, revealing to be a resourceful for the neurological damage. Fibromyalgia, even if it does not concern Gigliola, is another pathology often associated with bladder pain syndrome. This condition begins to be treated in a hyperbaric chamber too, as we explained in a recent webinar by Dr. Belkacem that you can watch on our website.

From September 2015, Gigliola has started a process of weekly therapy with Marco, the osteopath of our Centre, and she is achieving excellent results. In the sessions with Marco, Gigliola begins with Spirotiger, a breathing exercise system that trains specifically the strength of respiratory muscles by acting strategically on the pelvic diaphragm.

"If you learn to breathe better you let more oxygen enter the tissues and this lowers the acidosis of the body, relieve tensions and decreases pain.

Oxygen is the basis of everything!" Marco assured us, strong of his experience and training.

With Gigliola he also uses another innovative technique: Body-adjustment. Through slight neurological stimulation, he tries to activate the parasympathetic system, balancing the autonomic nervous system in order to obtain a correct modulation of the signal from the central nervous system to the peripheral system. Gigliola can count on precious help in the acute phases of the disease that recur sometimes between the cycles of oxygen therapy.

The whole treatment that Dr. Longobardi has planned for Gigliola will last two years. It is now clear that the multidisciplinary approach to this type of disease is essential in addition to perseverance and determination. And Gigliola is determined more than ever to continue these therapies, and we wish her the best of luck and a fast recovery!

---

## Right left shunt (PFO) and plane flight



Good evening,

I would like to know your opinion regarding a small septal defect of the type oval fossa that affects my 18 years old son.

He has been practicing swimming for several years at a competitive level. For this reason he needs a

suitability to sport certificate, that he obtain every year with medical check-up. In 2005, as a result of routine visits, a small septal defect was found.

The examinations taken are the following: 24 hours Holter ECG, electrocardiogram, echocardiogram m-Mode/ 2D/ Doppler/ Color and ECG.

Recent tests performed in May 2015 revealed the following diagnosis: "Aneurysm of the atrial septum with the presence of mild left to right shunt. Cardiac chamber of normal size and function. Current good hemodynamic compensation. Good tolerance to physical exercise."

The cardiology sports centre, where my son is treated and followed, didn't highlight side effects of practising sport at a competitive level, with the exception of diving with scuba tank.

Francesco will soon have to travel by plane, and I wonder if you think that he can fly normally or if he has to take special precautions and if you recommend he undergoes additional examination (beside the regular routine checks) in order to assess the status of the pathology.

Thank you in advance for your attention and availability.

### ***Dr. Pasquale Longobardi responds***



Thank you for your esteem.

In summary: Francesco can fly without concerns (if you want to take all the precautions, check with the family doctor the normality of coagulation markers: homocysteine, protein S, factor II and factor V Leiden). I confirm that it has no problem regarding the swimming activity.

According to cardiologists and sport physicians there is contraindication to diving with scuba tanks while there are no contraindications for free diving.

The doctor expert in diving activity has a different opinion: the suitability to diving with scuba tanks depends on the location and the magnitude of the shunt. I explain below the steps for the evaluation of left right shunt created by the hyperbaric facility which has been applied to 334 patients, allowing us to gain experience and expertise.

To check the location of the shunt (cardiac or extracardiac) three exams are needed: transcranial Doppler, blood-gas analysis and transcutaneous oximetry during oxygen breathing. The diving unsuitability (up to the eventual closure of the shunt) occur only in case there is a passage, in basal conditions (no Valsalva maneuver), of over ten microembolic signals (occurred shut) and a major desaturation of oxygens partial pressure in arterial blood (under 300 mm of mercury). For most minor alterations the suitability is released with the recommendation to enforce standards of good practice for immersion (like avoid getting into the boat wearing the equipment).

The right-left shunt treatment is provided on Wednesday at the Hyperbaric Centre of Ravenna. (phone: 0544-500152; e-mail: segreteria@iperbaricoravenna.it).

If you accept my suggestion to clarify how "small" is Francesco's shunt, call for an appointment. I'm looking forward to see him.

Best wishes,

Pasquale Longobardi

*Medical director of the Hyperbaric Centre of Ravenna*

*Degree in Medicine and Surgery at the Second University of Naples and specialization in Medicine*

## Anna Maria suffers from Alzheimer's Bürger: treated with HOT, medications and FREMS therapy



Good morning,

I am suffering from Bürger's disease, my second and third finger of my right hand and third finger of the left hand were amputated in 2012.

Currently, the third finger of my right hand is infected. Last week I was hospitalized at the Marsala centre of vascular surgery where they treated me with Ilomedin without success. At the moment, the third finger of the right hand is reddened and I have a strong pain, despite the morphine I'm taking.

Since the therapies carried out until today didn't lead to improvements, and since I'm tired of being sick I'm looking for an opinion by qualified personnel. For this reason I ask your competent advice.

Looking forward to your answer.

Kind regards, Anna Maria

### **Klarida Hoxha, nursing coordinator, responds**



Dear Anna Maria,

thanks for writing us. I am sorry for the situation you are dealing with. We know very well the discomfort and the pain that your illness entails because over the years we have treated many patients with your characteristics.

The Bürger's disease is a chronic inflammatory disease, also called obliterans thromboangitis, which affects certain arteries and veins (mainly in the extremities), usually causing their obstruction (from which the term obliterans) following the formation of thrombi.

And that is exactly what is happening to your finger right now. At the Hyperbaric Centre of Ravenna we follow a well-structured treatment that leads to an improvement in quality of life. As you know, this disease can't be cured, but the symptoms can improve. The treatment includes:

- Absolute prohibition of smoking, either directly or indirectly (i.e. breathing other people's smoke)
- Administering corticosteroids, nonsteroidal anti-inflammatory drugs (NSAIDs), anticoagulants and vasodilators: combination therapy often gives good results
- In addition to the cyclical administration of vasodilators (what you did with Ilomedin), an established and useful procedure combines:
  - Sessions of hyperbaric oxygen therapy (HOT) at least twice a year: it is a therapy based on breathing pure oxygen under pressure in a particular environment (hyperbaric chamber). The pressure allows the diffusion of oxygen in the blood with a concentration ten times faster than normal. In this way the synthesis of nitrogen monoxide (NO) is stimulated. This gas promotes blood circulation in the skin, mobilizes important stem cells for the regeneration of the skin and

activates fibroblasts (cells capable of producing the extracellular material that keeps the skin texture)

- Gradual administration of Trental E.V during the sessions of HOT following special schemes

- Neurostimulation through FREMS™ therapy. This treatment has a lasting healing effect, it quickly reduces pain, has no side effects, has a relaxing effect and increase the blood supply to the treated area leading to an improvement of blood circulation. The therapy is carried out with the application of small transcutaneous electrode in the treated area: the patient lies down on a bed and once the electrodes are applied, the treatment lasts on average 30 minutes

- Dressings adequate to the stage of wounds. Usually we demarcate the necrotic areas, we dry them and we "mummified" them to make them "fall". Then we apply betadine, or anti-inflammatory medications such as ichthyol, usually used in initial stage of treatment

If you want to follow our treatment, I invite you to get in touch with us. For more information or to arrange a visit, call our office at 0544 500152 or send us an email at [segreteria@iberbaricoravenna.it](mailto:segreteria@iberbaricoravenna.it).

Best wishes,

Klarida Hoxha

---

## Silvio suffers from osteomyelitis: he can treat it with hyperbaric oxygen therapy



Good evening,

I need your advice: I have a serious infection with Streptococcus at the left ankle. Over the last two months I have been treated with antibiotics, under the supervision of a specialist in infectious disease.

Yesterday morning, further to a resonance, I was diagnosed with osteomyelitis and the doctors recommended me to do an hyperbaric therapy.



I would like to have your opinion about it.

Thank you for your help, Silvio

### ***Dr. Claudia Rastelli, responds***

Dear Silvio,

Thank you for writing us. Osteomyelitis is an infection that affects the bones, it is classified according to criteria of Cierny Mader depending on the severity and on the affected bone structures. This classification allows to identify the most adequate treatment for the specific clinical case.

According to the protocol followed by the Hyperbaric Centre of Ravenna, I would firstly recommend you to see an orthopaedist, in order to understand the severity of the infection and whether it is necessary to do a surgical cleaning of the bone. Eventually, during the surgery some fragments of the bones would be drawn for examination and a specific antibiotic therapy would be prescribed.

The Hyperbaric Oxygen Therapy, when possible, should be done either before and after the bone removal. Before the surgery, to demarcate the affected area and reduce the infection and after the surgery to help the regeneration of bone tissue. Hyperbaric Oxygen Therapy, associated to a specific antibiotic therapy, is recommended to enhance the beneficial effects of the drug, making it arrive massively where needed.



If the specialist does not deem necessary to perform the surgery (many reasons might arise: general compromised situation, age or severity of osteomyelitis) the Hyperbaric therapy can be used to reduce exacerbations of clinical manifestations and to improve the quality of life. However, in this case HOT can't resolve the infection.

I invite you to contact us for further information or for an assessment of your particular case. Our office is available at the number 0544 500152.

Best regards

Dr. Claudia Rastelli

*Degree in Medicine and Surgery at the University of Ferrara. Order of Physicians of Rimini n. 2074*

---

## Spongy Edema, can Hyperbaric Oxygen Therapy be useful?



Dear doctor,

last April 4th, I finishes a cycle of 4 drip neridronic acid to treat a spongy edema to the bone of the right hip. Currently, I am doing magneto therapy for about 8 hours a day.

I wonder if hyperbaric oxygen therapy can be combined or can replace this therapy in order to accelerate the healing process.

Looking forward to your answer.

Many thanks, Paolo

## Dr. Andrea Galvani, responds



Hello Paolo,

According to the 2015 guide lines of SISMI (Italian Company of Undersea and Hyperbaric Medicine), the Hyperbaric Oxygen Therapy is indicated only for patients with a confirmed diagnosis of aseptic osteonecrosis at a mild/moderate level.

When the head of the femur is affected, the evaluation is carried using the "degree of Steimberg", detectable with an MRI. For the other bone districts, the evaluation is carried with Imaging to make sure that there is still integrity of the bone/joint profile.

The treatment carried at our centre provides 30/40 sessions lasting 90 minutes each at 2.5/2.2 bar pressure on a daily basis for five days a week.

The osteonecrosis treatment includes also a physiatrist visit, that is useful to monitor and evaluate all important rehabilitative aspects. Thereafter, after the first 60 days of hyperbaric oxygen therapy, it is advisable to proceed with a follow-up MRI.

For any further queries or requests please contact us at our office phone number 0544-500152 or write to [segreteria@iperbaricoravenna.it](mailto:segreteria@iperbaricoravenna.it).

Wish you the best of luck!

Dr. Andrea Galvani

*Degree in Medicine and Surgery at the University Alma Mater Studiorum of Bologna, Order of Physicians and Surgeons of Rimini: n. 02337*

## How can I become hyperbaric technician?



Good morning,

My name is Enza and I am from Orta Nova (FG). I am interested in becoming a hyperbaric technician or assistant. I have been passionate about undersea medicine for years.

Looking forward to your advice.

Yours sincerely,

Enza

### ***The crew chief Gian Luca Baroni responds***



Dear Enza,

Your question made me very happy, and I am glad to know that you have been interested for long time to undersea

medicine.

So, long story short: currently there is not a specific law to become sanitary hyperbaric technician. The national guidelines ISPELS, now under the name of AIL, specify only that the personnel required has to be trained.

That said, the reality is that the technicians are specialised in professional courses organized by

provinces or regions through training institutions. The region with special autonomy are the ones leading the training offer. Another way is to have experience in the “offshore divers technical operators” field: in this case technicians are drawn from staff who worked in saturation rooms.

Since some years ago, the University of Pisa CNR set a master programme that provides the qualification of sanitary hyperbaric technician. It lasts one year and classes are held in the weekends. Also in Padova it was recently held a course for hyperbaric technicians as part of the programme of the new master's degree in Hyperbaric Medicine. You can surely find more information on these programmes on the universities' websites.

If you need more information or if you have other questions, you can contact our office at the phone number 0544.500152.

Best wishes,

Gian Luca Baroni

*Hyperbaric Technician of the Hyperbaric Centre of Ravenna*

## Discopathy, hernia and fibromyalgia. Vincenzo asks info on public health assistance

Good morning,



I am 57 years old, and I have been undergoing treatment for serious multiple disc problems at my back for over ten years. I had a surgery on my right shoulder and left shoulder for rotator cuff reconstruction. Also, I have cervical hernia and I was diagnosed fibromyalgia at the Rizzoli Hospital in Bologna.

I would like to know if your treatments are sponsored by Asl (Local Health Authority) or Inail (National Institute for Insurance Against Occupational Accidents), because my disease was recognised as occupational accident.

Thank you.

Regards, Vincenzo

**Dr. Belkacem Nedjouda responds**



Dear Vincenzo,

Although our centre has an agreement with the AUSL, local public health service, unfortunately the national health system does not sponsor treatments for fibromyalgia yet.

Since this disease has been recognized in recent years and it has been increasingly diagnosed, the National Health System may consider to include it in the treated disease if a high incidence on the population is reported.

Therefore, I invite you to join an association that help to give more power to individual claims to NHS, hoping that in the future we can find an agreement at the national level.

Currently, the various therapies offered by our centre, including Hyperbaric Oxygen Therapy, are subjected to a fee, but we introduced discounts to ease the access to the treatments and help our patients.

For further information, I invite you to contact our office at the phone number 0544 500152

I remain at your disposal for further clarifications.

Dr. Belkacem Nedjouda

*Degree in Medicine and Surgery at the University of Ferrara and specialization in internal medicine, Order of Physicians and Surgeons of Ravenna: n 2794*



**Centro Iperbarico Ravenna**

via A. Torre, 3 - 48124 Ravenna (RA)

Tel 0544 500152 – Fax 0544 500148



Email [segreteria@iperbaricoravenna.it](mailto:segreteria@iperbaricoravenna.it)  
[www.iperbaricoravenna.it](http://www.iperbaricoravenna.it) - [www.iperbaricoravennablog.it](http://www.iperbaricoravennablog.it)