

# What role does the lymphatic system play in the treatment of chronically ill patients?

Bettina Decher, Naturopath, Frankfurt, Germany

## Part I

### Structure and function of the lymph system

#### Lymphology

The term 'lymphology' is understood as the study of the structure and function of the lymph system. We further differentiate between 'lymphangiology' and 'lymphadenology'.

**1. Lymphangiology** describes the anatomy, function and pathophysiology of the lymphatic vascular system.

Relationships between the lymph and blood vessel system:

- lymph: a very special fluid (historical derivation, composition, quantity, transportation, speed of flow, drive)
- the Lymph Obligatory Load (LOL) (water, cell load, fat load and protein load)
- transmural fluid and substance exchange
- filtration and reabsorption
- tasks fulfilled by the lymph system:
  - drainage function
  - immune function
  - transportation function
- the significance of the interstitium

**2. Lymphadenology** concerns the lymph nodes, tonsils, spleen, thymus, Peyer's patches and bone marrow and is closely related to the fields of Immunology, Haematology and Oncology.

#### The Lymph system

The lymph system is derived from the mesoderm, the structures of which have for the most part an interlinking character. It consists of a vascular network, a vascular

ring and a few associated organs, which also have other important functions.

Essentially the vascular network of the lymph system runs parallel to the venous system. Venous blood is taken from the capillaries, i.e. from the smallest arterial blood vessels and conducted to the right heart. By contrast, lymphatic capillaries begin everywhere in the tissue from closed ends and these collect the lymphatic fluid and transport it on. After the lymph has passed the lymph nodes, the lymph collects in the large lymph pathways.

These include the left and right trunci lumbales where the lymph from the lower extremities collects, from the pelvis, parts of the abdominal wall, the urogenital tract and the paired abdominal organs. On the other hand the lymph from the unpaired abdominal organs flows together in the Trunci intestinales. There again the Trunci lumbales and intestinales unite at the level of the second lumbar vertebra in the Cisterna chyli. This is where the Ductus thoracicus starts, which is considered to be the main lymphatic vessel. It runs from the abdominal cavity through the diaphragm into the posterior mediastinum dorsal of the oesophagus between the thoracic aorta and the spine on to the left venous angle, which is formed by the left Vena subclavia and Vena jugularis interna, then back into the blood circulation system. These transport 10% of the peripheral flow of fluid.

The right lymphatic duct opens into the right venous angle, which is formed by the right

**Vena subclavia** and **Vena jugularis interna**. It transports only the lymph from the right hand side of the upper body, this representing a much smaller catchment area.

The blood exits from the right and left venous angle, enriched with lymphatic fluid, directly into the superior vena cava. When making energetic measurements the vena cava is observed relatively frequently as a structure needing support in terms of stress on the lymphatic system

The large lymph pathways are distributed across the whole body and take care of supply and drainage areas, which then connect again with the main blood circulatory system. As with arteries and veins, the major lymph vessels are made up of three layers:

1. The Tunica intima covered with endothelial cells, whose function is supported by an elastic interim layer, the Lamina elastica.
2. The Tunica media which is covered with smooth musculature.
3. The connective tissue-based Tunica adventitia.

Since lymph is only meant to flow in one direction, the lymph vessels, similar to the veins, contain valves that prevent reflux. The flow of lymph is also supported in the lymph capillaries and in the lymph pathways of the skeletal musculature by means of the "lymph pump". This occurs through pulsation of the surrounding arteries, breathing movements and muscle activity. An increase in pressure in the surrounding area activates the flow of lymph considerably, and muscle work can increase lymph flow rate by as much as 10 to 15 times.

In addition to the lymph vessels described above, the lymphatic tonsillar ring is also included in the lymph system. It consists of the Tonsilla palatina (pharyngeal tonsil), the paired Tonsillae phryrangea (palatine tonsils), the Tonsillae tubariae (lymphoid follicles located in the posterior part of the tongue)

The term "ring" is understood here more in a figurative sense because the named structures form small tissue islets, which in every day parlance are called 'tonsils'. An actual connection is also formed naturally between these islets by the fine lymph networks and mucous membranes and their function is essentially described as a defence barrier.

The whole lymph system is supported by organs whose functions are frequently much more commonly associated elsewhere (see Lymphadenology).

Since the lymph system is essentially a cross-linking system, it deserves considerable attention. The whole lymphatic vascular system has the capacity to handle a return transport volume of more than 100 l/day, which is a huge quantity.

The quantity of lymph per unit of time is another proof of the enormous capacity of our bodies to adapt. The lymph time volume at rest in the Ductus thoracicus amounts to 1–2 l/day, but can be as much as 20 l/day.

In cases of serious internal disorders, it may even be as high as 50 l/day.

In all cases of extracellular oedema the lymphatic system is required to serve as a particularly powerful recycling system.

It has an impressive functional reserve, the compensation capabilities of which can prevent venous oedema, for example during long periods of standing or sitting, or if activation of the muscle pump is compromised.

The special function of the lymph nodes, besides having a filtering function, is to set specific immune responses in motion, and it is here where B lymphocytes mature. Only after passing through the lymph nodes does the lymph collect in the large lymphatic vessels. In this way we see how every step of purification is at the same time also linked with other life-preserving steps.

## Lymph

'Lymph' is the name given to the clear fluid from the interstitium, which is usually watery and clear. The so-called white chyle which develops after consuming a fatty meal is an exception.

The different Lymph Obligatory Loads:

**1. The Protein load** describes the proteins that are important for the provision to and disposal from tissue (albumin/globulin). In addition to water and the dissolved substances contained in it, they escape physiologically into the interstitium to supply tissue by diffusion and ultrafiltration as part of microcirculation. The venous system is unable to take on the return transport. So the lymphatic system acts like a 'shuttle service', which transports the protein load back into the venous system.

Within 48 hours all the albumin and globulin 'passengers' make use of this 'shuttle service', which is vital to life.

**2. The Water load** describes around ten per cent of the fluid that escapes from the blood vessels to reach the interstitium. In this way the fluid filtration of the vessels is increased and at the same time the filtered proteins are washed out of the interstitium. This process is reminiscent of washing out gold from muddy water.

**3. The Cell load** is made up from all the white blood cells, in particular lymphocytes, which have reached the interstitium by penetrating the blood capillaries, and also pathogens, foreign bodies such as grime or dust, cells and other substances such as hormones, glucose or other metabolic products. These too are filtered and transported.

**4. The Fat load** is produced when dietary fats from the intestine are emulsified by bile and absorbed into the lymphatic tissue of the small intestine. The lymph appears milky here. It collects in the Cisterna chyli, where it mixes with the clear fluid from the rest of the body. Fats are transported therefore from the lymph

duct and initially reach the blood via the Ductus thoracicus, and only then reach the liver. Unlike carbohydrates and proteins which are able to travel in a direct route via blood, only 10% of short-chain fatty acids are directly resorbed via the Vena portae.

Lymph is very similar to blood plasma, but has less protein.

Its protein component is on average 20 g/l compared with blood plasma which has 70 to 80 g/l. Levels of protein concentration differ depending on the section of the lymphatic system and region of the body. While in liver lymph there is six per cent, which corresponds to 60 g/l, we find in the intestines four per cent, corresponding to 40 g/l and in the extremities 10 to 20 g/l. With a production output of 2–4 litres in 24 hours, lymph takes on important tasks for metabolism and the immune system.

## Lymph transport

The functional unit of the lymphatic collectors is the lymphangioma – a section of vessel confined by two valves. The resulting segments, depending on how full they are, appear drop-shaped and give rise to the string-of-pearl structure of the collectors, which is visible in a lymphogram. The distance between two valves is around 3–10 times vessel diameter (in pre-collectors 2–3 mm, in collectors 6–20 mm, in the Ductus thoracicus up to 10 cm).

Since the lymphatic vascular system is not a closed circulation system with a pump, the lymphatic fluid is driven by various mechanisms.

Essentially neural and hormonal influences modify the lymphangioma's own motor function. The pulsation frequency of lymphangiomas at rest is approx. 1–10 per minute, with a maximum load of 20 per minute.

Because of the low pulsation frequency of lymphangiomas, heat supply is increased.

### **Factors determining lymph drainage:**

- Metabolic status (tissue specificity, oedema-triggering conditions like inflammation, vegetative regulation)
- Vascular properties (endothelium, quantity and functionality of the lymphatic vessels, lympho-venous anastomosis)
- Pressure conditions in capillaries and in the interstitium (hydrostatic and colloid osmotic pressure)
- Mechanical pressure conditions (muscular contraction, intestinal peristalsis, breathing, arterial pulsation, external pressure)
- Physical activity (increased metabolism increases lymph obligatory load, on the other hand contractions of the skeletal musculature encourage lymph flow)
- Temperature effect (heat supply increases metabolic performance and with it lymph obligatory load).
- Food ingestion (lymph obligatory fat load is increased by digestion)
- Pain (can reduce the pulsation frequency of lymphangiomas)

### **Summary of the tasks performed by the Lymphatic system**

#### **1. Drainage function**

(= Flushing out the lymph obligatory load from the interstitium)

Thus the lymphatic vascular system is also responsible for transporting pain mediators away from tissue as well as haematomas and drugs introduced via i.c., s.c. and i.m. injections. If the drainage of tissue is not functioning perfectly then congestion occurs with swelling and pain. This can cause inflammation and already existing inflammation will not heal easily.

#### **2. Immune function**

The endothelial cells of the initial lymphatic vessels and the cells themselves normally found in the lymph function in fact as defence cells, the lymph pathways as transportation routes and the lymph organs as activity centres of the immune system.

### **Primary lymphatic organs:**

(Formation of lymphocytes)

Thymus – red bone marrow

### **Secondary lymphatic organs:**

Spleen – lymph nodes: mucosa-associated lymphoid tissue (MALT)

### **3. Transportation function**

The significance of a well-drained interstitium to heal chronic illnesses or prevent their occurrence.

Lymphadenology is still being developed, as well as linking the cardiovascular system – lymph system with an overall consideration of the importance of the lymph system in therapy, especially with respect to close associations with the autonomic nervous system (ANS).

By using BRT we can set cells in oscillation and increase the level of "flow" in tissue, and by so doing we also increase the effectiveness of the lymphatic system and, because the lymphatic system links to so many other systems, we have here an important even central, starting point for effective therapy.

## **Part II**

### **Diseases associated with an impairment of lymph flow and their successful treatment with BRT**

Disorders associated with impairment of the lymphatic system, and lymphatic therapy with specific reference to BRT, are listed below:

#### **Eye problems**

Because of raised lymph pressure in the upper head

#### **Allergies**

#### **Breast conditions**

Mastopathy, mastodynia, mastitis, mastectomy (arm, armpits, operation site)

#### **Skin region**

Acne vulgaris, cellulitis, facial oedema, bite wounds, sunburn

#### **ENT infections**

##### **(acute, recurring, chronic)**

Impairment of the lymphatic tonsillar ring with corresponding effects such as angina, tonsillitis, laryngitis, pharyngitis, otitis media, sinusitis, rhinitis after mononucleosis (glandular fever), after operations etc.

#### **Lymphangitis**

**Lymphatic diathesis – constitution,** particularly in paediatric practice

#### **Lymph node swelling**

#### **Lymphoedema – blockage in the drainage system**

#### **Scars**

#### **After skin and eliminating therapies**

Cupping, Baunscheidtism, Cantharides plaster, leech therapy

#### **After radiotherapy**

#### **Pain therapy**

For example, Baker's cyst, joint pain associated with swelling and possibly inflammation, headache, where lymphatic drainage from the head region is impaired.

#### **Sports injuries, traumas**

Swelling, haematomas, contusions, bruising, strains, fractures, luxation.

#### **Vein therapy**

For varicosis, chronic postoperative vein surgery. After vein stripping, ulcus cruris, haemorrhoids

#### **Dentistry**

After maxillo-dental surgery, inflammation

As can be seen from this list of possible diagnoses, the range of conditions involving the lymphatic system is extensive, hence the opportunities for using bioresonance therapy are numerous too.

#### **Beware:**

A detailed examination remains important. Be careful with suppurating lymph nodes (tuberculosis, streptococcal and staphylococcal infections) and lymph node metastases.

#### **Therapy approach using Bicom Bioresonance therapy**

Bioresonance therapy works particularly well through its specific application to the major lymphatic glands providing effective stimulation to the lymphatic flow.

Moreover, it stimulates and regulates the whole regulatory system of the human body.

In connection with lymphatic-related diseases, targeted testing of the condition of the kidneys is very important. These are closely connected with lymph via their association with the blood capillary system.

Therefore, it is important to always strengthen the body's elimination capacity via the kidney-bladder. Here too, consider the meridian programs.

Likewise, attention should be given to the condition of the cardiovascular system and liver by means of anatomical associations. These organs are all associated with the venous system, such that any congestion in this system will impair lymph drainage and this in turn will lead to swelling of the lymph nodes. Since the lymphatic system is fundamentally important for detoxication, which of course assumes particular significance in holistic medicine, here again we can clearly see interrelationships that are of crucial importance for our bioresonance therapy.

The interdependencies in the lymphatic system are more diverse than in any other system in the body.

In this context the association of the lymphatic system with the autonomic nervous system (ANS) is very interesting too. This association is a very close one and helps explain why patients with classic lymphoedema are (usually) not easy to treat because they always have an irritation in the autonomic nervous system, which has been caused by stress of various kinds. Due to the close links to the ANS, and therefore to the inner soul and spirit of man, the lymph is a truly "special fluid" (see also Thomas Mann with his deliberations in "The Magic Mountain").

Therefore please always use lymph treatments in connection with treatments of the autonomic nervous system, the cardiovascular system, liver and/or kidneys, depending on the condition of the patient and, if necessary, bioenergetic testing, preferably of all organ systems.

In particular, lymphatic therapy also serves as a useful supplement to allergy therapy (because allergies are often associated with lymph node swelling).

With bioresonance therapy the classic programs (Pg.) for the lymph system are Pg. 830 (Ai) and Pg. 930 (A).

With the BICOM optima:

Pg. 830.3 + 930.3;  
Pg. 200.3 Lymph treatment acute and  
Pg. 201.2 Lymph treatment chronic

#### Lymphoedema:

Pg. 610.4 and PS 10098,  
Pg. 3036.0 (here the connection to the kidney becomes very clear = regulate detoxication) + Pg. 3126.0 Poor circulation,  
Pg. 3066.0 Lymph activation (LDF)

The additional use of the cylindrical hand electrodes on the axillary lymph glands and the inguinal lymph glands particularly increases the level of effectiveness of lymph stimulation.

---

The following program numbers have also proved beneficial in connection with treating the lymphatic system.

#### **Vegetative dystonia:**

Pg. 900.1, Pg. 915.2, Pg. 940.2, Pg. 960.4,  
LDF PS 10170 vegetative disorder,  
Pg. 3021.0 Improve blood count – (see connection blood – lymph system – ANS)

#### **Kidney:**

Pg. 480.1, Pg. 481.0, Pg. 482.0,  
Pg. 380.4 Acute treatment of the kidney,  
Pg. 381.6 Chronic treatment of the kidney and/or  
LDF Pg. 3036.0, Pg. 3078.0, Pg. 3079, Pg. 3080.0 or  
PS 10114 Renal function control

**Liver:**

Pg. 430.2, 431.3 and/or LDF Pg. 3063.0,  
Pg. 310.9 Liver acute, Pg. 311.11 Liver chronic,  
PS 10093 Liver detoxication

**Liver, gallbladder regulation:**

Pg. 3064.0

**Heart:**

Pg. 401.1 + Pg. 524.3,  
PS 10068 (heart problems related to the nervous system 904.0 + 906.0)

**Bladder:**

Pg. 390 and/or LDF 3018.0,  
PS 10025 (3018.0 + 490.1 + 3036.0)

---

Other program numbers can be added in addition depending on the individual state of the patient and/or testing.

It makes sense and is necessary especially for symptoms in the tooth area to carry out tests on the teeth from the dental test set and treat with the CTT.

The use of organ ampoules from the 5 elements test set has proved beneficial particularly in the treatment of clinical pictures associated with lymph drainage disorders.

The targeted selection of substance complexes which are available in channel 2 of the BICOM optima increase the level of efficacy and so ideally shorten the length of treatment.

**Important:** Make lymph drops for taking at home e.g. from Bicom minerals or even test natural remedies to be taken additionally or even for incorporation into the therapy e.g. Lymphdiaral drops / Solunat no. 9 / 16, Lymphomyosot or similar, and place them in the output cup or the chip device, respectively, of the Bicom when applying bioresonance lymph therapy (Channel 2 is effective only over the mat or the chip device, respectively).

The following plants have a positive effect on the lymph system:

- Dandelion (*Taraxacum officinale*)
- Figwort (*Scrophularia nodosa*)
- Wolf's clubfoot moss (*Lycopodium clavatum*)
- Fool's parsley (*Conium maculatum*)
- Calendula (*Calendula officinalis*)
- American pokeweed (*Phytolocca americana*)
- American coneflower (*Echinacea angustifolia*)

In severe cases manual lymph drainage (MLD) is recommended in addition.

In my own practice we have achieved very good outcomes when combining both therapies. Patients are first given BRT to stimulate the lymph glands and the detoxification regulatory system and then MLD with my colleague who has been specially trained in this area.

It is particularly important here to give the patient plenty of pure water to drink after the bioresonance therapy. Patients become unusually dehydrated after therapy and if we consider the purifying, detoxifying effect of water, we can visualise the lymph pathways being flushed through, which in turn helps detoxify and regenerate the interstitium.

## **Part III**

### **Examples of patients – Case Reports**

#### **Preliminary Remarks**

I treat patients in my practice on a daily basis with problems with the lymphatic system or connected to the lymphatic system, i.e. organs which affect the lymphatic vascular system. However up to now I have not written up any case reports in the sense of producing typical "case studies". I wish to do this for presentation at the Congress.

1. Lymphatic Constitution – the example of a child with chronic recurring infections of the upper respiratory tract.
2. A female patient who came to me after a root extraction with a swollen cheek and severe congestion in the upper lymph system, who recovered after a short time and was very enthusiastic and totally convinced of the merits of bioresonance therapy, because all other "conventional medicines" had failed.
3. Patients presenting more commonly in our practice with lymphostasis in the legs, abdomen and/or in their arms, i.e. classic lymphoedema.

#### **Patient Case Studies**

##### **Case 1 R. W., female, aged 61, Office Administrator**

**Case history:** The patient presented for the first time in February 2011 because of recurrent head and shoulder pain on the right side – these were treated with osteopathy and improved rapidly.

On 8th March she presented with rheumatic symptoms.

**Findings:** Not available to me

##### **Testing – Test results:**

- Herpes zoster, gluten and milk protein intolerance
- Liver and spleen/pancreas meridian tested low.
- Kidneys/lymph system irritated

**Diagnosis:** medically rheumatic disorder

#### **Therapy course and therapy programs used**

Liver and kidney strengthening (Pg. 430, Pg. 3080) and elimination of Herpes zoster using potency levels D5 and D15.

The patient is doing much better as a result, she largely avoids cow's milk and gluten.

However, she continues to see my colleague for physiotherapy and for manual lymph drainage (MLD), these costs being covered under the statutory health insurance system. After MLD the patient's legs are always less swollen and she can walk better again. But this condition only lasts at the most for a few days. We recommend to her in addition lymph and kidney therapy using bioresonance.

In April 2014 she came back for bioresonance therapy. This time the hormonal system and kidney/lymph both tested. Both organ systems were stimulated (PS 10198), in addition kidney (Pg. 480) and the lymphatic system (Pg. 830) and Lymphdiaral drops were tested and prescribed.

In May, following a visit to the dentist, a further treatment was administered using the dental ampoules from the dental test set: The magnetic depth probe applied from the outside on the affected sites 1.3/1.4 tooth nerve, Pg. 192.

In addition to physiotherapy and MLD, the kidney/lymph programs are now applied after testing approx. every two weeks. The last treatment took place in October 2014. The patient felt much better at that juncture. The rheumatic joint and muscle pain and symptoms had clearly abated, and mobility had increased considerably too, mainly due to reduced swelling in the arms and legs as a result of improved lymph drainage.

## **Final outcome**

By eliminating stress factors and regulating the kidney/lymph system, even persistent stubborn rheumatic symptoms were markedly improved, particularly following the additional use of the bioresonance lymph programs.

### **Case 2 R. G, male, aged 5**

**Case history:** Severe recurring cough, once with and once without sputum after a multiple immunisation on 6.1.2011 followed by an episode of fever.

**Findings:** not available from the doctor

#### **Testing – Test results:**

Using EAV:

- ▶ Ki, Ly and Lu meridian values were very high (irritated)

**Diagnosis:** recurring bronchitis, pseudocroup diagnosed Nov. 2012

#### **Therapy course and therapy programs used**

At the first treatment in November 2012 (R. was 3 years old) and second treatment (13.03.13 after which he went to preschool nursery in January) both the kidney and lung strengthening programs were used (Pg. 480, Pg. 210), from the second treatment the lymph strengthening Pg. 830. In addition, manual lymph drainage was performed as a supportive measure.

Since at this point in time the young boy was eating no fruit, vegetables or salad, he was encouraged to eat fruit every day at least and, if he refused salad, to eat more vegetables.

R.'s condition very rapidly improved even after these two treatment sessions, plus an additional prescription of Umckaloabo, 5 x 5 drops for acute bouts of bronchitis and then decreased with improvement, and with my advice to carry out a bowel treatment with "Lactobact junior", and his condition continued to improve steadily up to September. With this improvement in mind, and because I did not have the

original immunisation, I dispensed with elimination of the immunisation.

On 22.09.14 R. came with his mother and sister to my practice again because of tonsillitis, for which he had already been administered antibiotics about a month earlier, but which had now returned.

The lymph system tested high again and moulds tested positive. The liver meridian value was low. Therapy consisted of strengthening the liver (Pg. 430) then the lymph strengthening Pg. (830) and elimination of the moulds.

On 03.11 R. appeared again because of wheals after excitement.

Treatment again consisted in strengthening the liver, lymph and skin (10067).

Following this R. felt very well indeed.

Because of his very young age, therapy and the "normal" programs worked very quickly. In addition, his mother is very caring and gave additional remedies back at home. The family itself had to pay for the treatments. And so it stayed at four treatments, which were nonetheless very successful.

## **Final outcome**

Being a little blond boy with radiant blue eyes, R. does not fit the picture of the typical "lymphatic type". I therefore chose to document his case here because his story illustrates very clearly how, by involving the lymphatic system, we were very quickly able to improve his overall health.

### **Case 3 K. R., female, 47 years old, Head of Department in a pharmacological company**

#### **Case history:**

The patient had been coming to me since 2006 repeatedly for treatment – approx. every 2–4 weeks – for all manner of complaints, which after therapy all disappeared really quickly. In the meantime I had become her "go-to naturopath", and

only ever went to healthcare professionals for severe acute cases, such as a tooth root resection. This case study covers just the follow-up treatment I administered after this difficult procedure.

The patient came to see me on 17.02.14 after the dental intervention. She had a swollen jaw and numb lip and was in general rather upset and exhausted. This was the first time she had come for follow-up treatment with bioresonance therapy.

**Findings:** Status post resection of a tooth root 4.5/4.6 right lower, pain additionally in tooth 3.6 (left lower – dental findings unknown)

#### **Testing – Test results:**

Nerves, kidneys and lymphatic system tested as irritated – especially lymph, with test tubes containing 4.5/4.6 placed in the input.

**Diagnosis:** Status post root resection

#### **Therapy course and therapy programs used**

(Note: Treatments 1 + 2 = "acute emergency therapy", since practice time was limited)

17.02.14 Tissue healing Pg. 923 with the black cable in the middle and the red cable on the outside in the magnetic depth probe. The patient was advised to drink plenty and to go to bed, if need be with a quark dressing pack on her cheek, which was very swollen indeed.

18.02.14, still very swollen cheek – patient had fallen straight into bed exhausted, without the quark pack dressing. Again Pg. 923 plus the wound healing ampoules in the input – the patient already felt less pain.

19.02. The right side was still more swollen than the left, which however was still numb too, Pg. 923 right + 4.5/4.6 nosode tube in the input, then left side + 3.6 tube, first lymph Pg. 830.

05.03, cheek still slightly numb – tingling slightly less.

Pg. 3072.0 Nerve regeneration, then a lymph program and a lymph drainage and Pg. 923 + wound healing ampoule – overall much less swollen!

12.03. Pg. 3072, 911 nerve regulation – patient was still groggy, even though she was much better compared with her earlier state.

A cyst tested top right, which I couldn't explain, but after Pg. 192 with ampoule 1.5 and the "cyst ampoule" in the input, all was well. At this point the patient no longer had any symptoms. Therapy of the lymphatic system again, this time with Pg. 930.

19.03. Pg. 480 kidney and low deep frequency Lymph + manual lymph drainage (MLD) especially also on lower jaw/tongue base and facial area. The patient's lip now had plenty of sensation.

The symptoms have disappeared and the swelling in her cheek has gone down completely.

#### **Final outcome**

The case of this very difficult tooth root resection in a very sensitive patient was ultimately brought to a successful conclusion with the patient's complete cure mainly through the systematic use of bioresonance therapy using the lymph programs alongside manual lymph drainage.