

## The Oral Oxygen (O<sub>2</sub>) – Therapy (POT)

was developed and applied in a clinical environment by Prof. Dr. med. A. Pakdaman initially in 1970. In 1988 he introduced the method in Germany and Europe, where it would then be applied during therapy.

The unique method of the oxygen therapy has since been introduced in the area of clinical research in the medical, as well as in the food supply.

On December 4<sup>th</sup>, 1993 Prof. Dr. Pakdaman was awarded by a German Research Foundation in Munich / Germany for the best research in biological and natural medicine in Germany on his clinical-scientific research regarding Oral resp. Peroral Oxygen-Therapy (OOT/POT) with the annual “Manfred-Koehnlechner-Price”.

On 10 November 2000 Prof. Dr. Pakdaman was honoured with the Certificate of Innovations for his clinical and scientific work in the area of oncology and oxygen research, especially the peroral oxygen therapy (POT).

## GAS CONTENT IN NATURE

The principal source of oxygen for human consumption is the breathing air.

The air is consisting of a mixture of different gases and contains about 21 % by volume of oxygen, 78 % of nitrogen. Less than 1 % of this mixture are noble gases such as argon, helium, neon, radon, krypton, and xenon and 0,03 % carbon dioxide.

## OXYGEN

Oxygen is most widely spread and an indispensable element for life on earth. It participates in all biological and bio-energetic processes of our body, soul, and mind. As a therapeutic tool oxygen can be used to cure many cellular malfunctions like cellular and organ detraction.

Lack of oxygen (oxygen insufficiency) can bring serious health problems for human as well as for most creatures. In laboratory in cultivated cells, lack of oxygen triggers irregular, disturbed DNA syntheses. (14)

Oxygen participates in all burning processes outside and inside the body. During the procedure carbon dioxide, water, waste products, and energy are liberated. This energy is used for all cell functions.

The human body can survive without solid food for about 2 weeks, without liquids for less than a week, but cannot survive without oxygen for more than minutes. The oxygen is indispensable for the great majority of life forms on earth.

The atmosphere contains 21 % of oxygen. Oxygen is also solved in water. In a waterfall for example, the oxygen is found in a higher concentration. Water can be enriched with oxygen leading to a water that contains more oxygen than it did before, what means that it is of higher quality.

Oxygen as the most frequent element in nature is distributed in the most important natural components.

Oxygen is constituent of the air, of water, and of the earth.

Table 1 lists the content of oxygen in nature as a part of the air, in fixed form in water as well as in oxides, carbonates, and silicates of the earth crust.

**Table 1: Distribution of oxygen in nature**

Water	89 %
Earth's crust (lithosphere)	46 %
Atmosphere	21 (vol.)

## WATER

Water is covering three quarters of the earth's surface. It is found as ice in the polar regions. Lakes and rivers, clouds and rain consist of this fundamental compound. Life happens in “aqueous solution”.

- Water is the origin of life
- Water is the mother of all liquids
- Water is the optimum solution to transport substances in our body
- Water is indispensable to use participates to regulate all processes in our body and in nature
- Water helps the absorption process of all essential elements in our body
- Water raises kidney-function and improves secretion of urine
- Water improves the stomach-intestine-passage beside better secretion of waste products and intestine restoration
- Water improves stimulation and modulation of immune stations located in intestine area of the immune system
- Water improves metabolism
- Water improves the decontamination respectively the cleaning process by secretion of waste products and toxic elements of the body

- Water improves the heart-blood-circulation-function and optimises blood circulation
- Water operates as a solvent, promotes the transport of food and energy-forming material as well as that of medicine in the body up to the target organs through smallest capillaries
- Water improves the self regulation process by regulation of water-, electrolyte, and- temperature process
- Water improves and stabilises the function of CNS. A lack of water in brain or nerve cells can create heavy damage and function disturbances
- All body liquids (blood, urine, expectorate, gall, gastric juice etc.) consist mainly of water and function through water
- Water in cellular range is participating with approx. 63 % intracellular and approx.

37 % extra cellular of total body water

- Important lack of water in the body is leading to cellular and organic structure and function disturbances with psychical and mental participation, which finally might lead to death.
- Water regulates and stabilises the energy process of the cells, as a function of ion-channels
- And mitochondria as well as ADP-ATP synthesis and function of breathing chain
- Water functions as an electric dipole and biological, effective, memory-, energy- and information storing and giving remedy

## OXYGEN AND WATER

Oxygen and water are the basic components of nature. Their balance creates freshness, vitality, and is the important factor in improving the quality of life.

Clinical results have shown, that the amount of nitrate in water is reduced, when the water is oxygen enriched. This improves the quality of water and makes the water healthier for every one, specially children. (9+12)

Oxygen will effect a reaction with hydrogen (H<sup>+</sup>) in the parietal cells and thereby reduce the formation of stomach-acid (Hcl)  $\frac{1}{2} O_2 + 2e + 2H^+ \rightarrow H_2O$  (10)

## WATER BINDING WITH OXYGEN

In water gaseous oxygen is physically dissolved. Its concentration is temperature dependent. The quantity of dissolved oxygen (mg/l) in warm water is smaller than it is in cold water.

The fact that oxygen is physically attached to the water molecule, is of great importance in oxygen therapy. (7)

Following the enrichment of water with oxygen, the oxygen molecules are located between the water molecules, in so called "water recesses" and are covered by a water membrane. When this water membrane is splitting, the oxygen released.

When the oxygen enriched water gets into contact with mitochondrial tissue (glands, intestine, liver, kidneys, brain, heart, etc.) the water membranes are ripped open and the oxygen is released to the cells.

## OXYGEN PARTIAL PRESSURE (pO<sub>2</sub>)

Oxygen partial pressure (pO<sub>2</sub>) is an important parameter, allowing the determination of oxygen content in the blood. It is a very important factor in determining the relation between the oxygen enriched water and the level of physically solved oxygen in the blood.

Growing older, the amount of pO<sub>2</sub> decreases and tissue experiences oxygen deficiency.

It was observed, that the increase of pO<sub>2</sub> in blood is considerably after drinking oxygen enriched water.

**Table 2: Determination of pO<sub>2</sub> in venous blood before and after peroral oxygen treatment with a bottle of 0,33 l oxygenated water and an oxygen content approx. 45 mg/ l. (the patient lays in a closed room with minimum O<sub>2</sub>-content) Institute of Anaesthesiology at the Johannes-Gutenberg-University Mainz / Germany 92/1992) (5)**

Controlled laboratory parameter	Before peroral O <sub>2</sub> -treatment	5 minutes after	10 minutes	15 minutes	20 minutes	30 minutes
			after drinking of 0,33 l of oxygen enriched water	after	after	after
T	37°C	37°C	37°C	37°C	37°C	37°C
Hb	15 Gr%	15 Gr%	15 Gr%	15 Gr%	15 Gr%	15 Gr%
pO <sub>2</sub>	19.5 mmHg	33.8 mmHg	31.0 mmHg	30.0 mmHg	29.2 mmHg	28 mmHg

This examination has been performed in 20 patients and probationers. Results were obtained from the blood and by transcutaneous measurement. The results have been documented.

Oxygen and water are the basic components of nature. Their balance creates freshness, vitality and it is the important factor in improving the quality of life.

## MAN AS A WATER CREATURE

Life began in water and during evolution of earth and organic life creatures spread out over the continents. Interestingly humans still did not lose the character as a "water creature" during the long fundamental development process.

The condition, that the human have the behaviour of a water creature is kept until birth and even shortly after birth, so that new born babies are able to swim and survive for a certain period under water; later on this capability gets lost. Indeed the moment of birth is the moment of metamorphosis or the transition phase from water creature to human bring with pulmonary resp. air (oxygen) breathing.

History of development shows that the human embryo in a early stage of life (intrauterine life) requires for living and development unconditionally water resp. amnion fluid (water in which embryo is swimming).

Amnion fluid in its vital composition of protein, glucose, creatinine, urea, phospholipids, oestriol, O<sub>2</sub>, CO<sub>2</sub> etc. and a pH-value of 7 functions on one side as protection of the embryo and on the other side as exchange and transport medium on this stage of life. Indeed it can be called as a kind of "water life".

Due to this historical background and the scientific possibilities it is possible to support and maintain the lung function in certain cases like acute pulmonary disease (malfunction) or collapsing lung with high concentrated oxygenated liquid. In this process the oxygen content will be installed in the bronchia. The oxygen in the water will be consumed by the alveolus and by that improving the optimising of the breathing function resp. the biological oxidation. This process can be named as a sign of nature- and origin relationship or in other words as return to origin, which can be certainly of decisive therapeutical significance in future medicine.

Primitive, microbial organism as well as single cell components requires water resp. intra- and extracellular fluids for their function.

If the water molecule (H<sub>2</sub>O) can be seen as a connection of 2 gases, a gaseous condition is expected. A precise view of the molecular structure shows a bridge construction between the single water molecules, which finally lead to big molecular units. This water-structure have physical possibilities of forming connections with other material and elements, among gases like oxygen.

It has to be mentioned, that beside the daily consumed water through specific biological body processes like oxidation a certain quantity of water will be produced, which is named as oxidation water. The breathing chain as most important energy producing process for instance delivers under normal condition approx. 300-400 g water/ day.

Furthermore body fluids as well as intra- and extracellular fluids as life-important liquids of the body consisting for the most part of water. This liquid body condition participates on various biological- and bioenergetical body functions, like functions of ion channels and ion transport, transport of food and hormones, water-, electrolyte- and heat household transfer, energy forming of the cell, information- and energy transfer and exchange.

Water stabilises the morphological cell structure as well as the functionary preservation of life on atomic, molecular and cellular level and finally:

Water is an universal, existential, mystical medium. It has a memory function, it stores and gives information and energy. It follows the law of polarity, it is a good natured, profitable, constructive and life giving component of nature as well as mean, damaging, destructive and life taking component of nature with a profile of energy and matter as well as a high potential strength of nature as an important parameter for life forming and life keeping.

## ORGANIC BLOODCIRCULATION AND OXYGEN ABSORPTION

Organic bloodcirculation as one of the existential lifeprocesses basically functions through the capacity of the heart-vascularsystem and improves the absorption of nutrition and oxygen provision of the tissue.

Pathological alterations in any range of this system might lead to disturbances in bloodcirculation with subsequent complications.

**Table 3: Blood circulation in different organs and oxygen uptake in rest, 70 kg body weight**

Organ / area	Blood circulation (%)	Oxygen uptake (%)
Brain	13	20
Heart	4	11
Abdominal area	24	25
Kidneys	19	7
Skeleton muscles	21	30
Skin	9	2
Other organs	10	5

The administration of oxygen enriched water to organs as there are brain, heart, lung, abdominal area as well as to eyes and the immune system resulted in a positive therapy effect and improved regulation mechanisms.

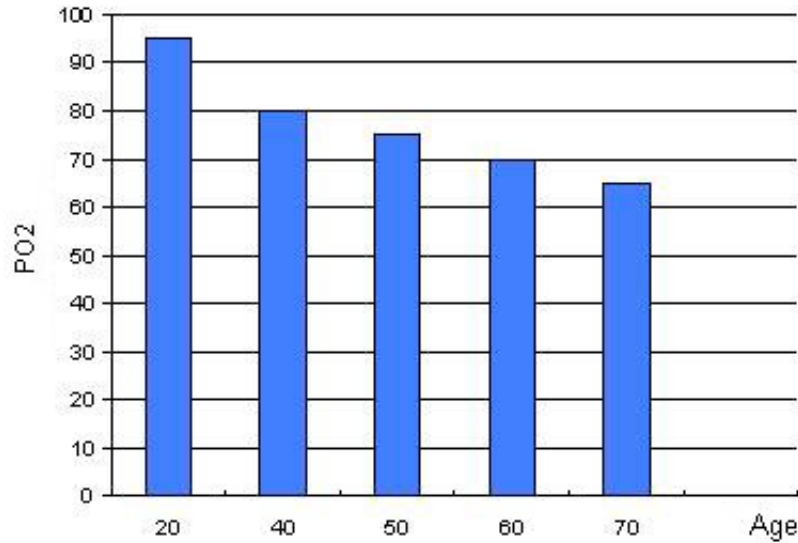
## OXYGEN DEFICIENCY DEPENDING ON AGE

By a deficient oxygen uptake or oxygen efficiency, severe and destructive processes can be caused in humans and other organisms.

An optimal oxygen uptake is absolutely necessary to maintain the bio reactions of the body and for a healthy life.

Oxygen saturation of the blood and  $pO_2$  play a decisive role.

**Fig.2: Average  $pO_2$  of blood depending on age**



A reduction of  $O_2$  content in the blood is observed with increasing age.

## ENRICHMENT OF DIFFERENT LIQUIDS WITH OXYGEN

Numerous liquids with different chemical properties and concentrations can be enriched, empowered, and dynamised by enrichment with gases, esp. with oxygen and can be used with positive effects in medicine, environment, and industry.

In a study different liquids have been enriched with oxygen by a new special method (Pakdaman, A.) (6)

**Table 4: Oxygen content of different liquids before and after enrichment with oxygen**

Liquid	Temperature °C	$O_2$ -content in mg/ l	
		before enrichment	after enrichment
Drinking Water	20	7,0	80,0
Distilled Water	20	11,2	42,5
Mineral Water	20	1,5	42,0
Sodium chloride solution, isotonic	16	8,0	45,0
Sodium chloride solution, hyperton.	16	8,2	45,0
Haemacell 35 blood replacement	20	8,1	39,0
Milk	22	1,7	40,0
Orange juice	21	5,2	40,0
Beer	21,7	0,2	30,8
Isostar	20,7	0,5	40,1
Cola	21	0,4	24,1

The development in the last years made it possible to achieve an enrichment of drinking water with oxygen to more than 80 mg/ l.

## OXYGEN ENRICHED WATER

Recently the interest in nutritional science has rapidly grown and new means were developed to combine oxygenated water and to study their effect on the human body. The following is an attempt to address the oxygen enriched water issue.

At present, the earth has a population of almost 6 billion people with a consumption of about 12 billion litres of drinking water each day. According to recently published statistical data, about 36% of earth population suffer from oxygen deficiencies. This situation creates a big responsibility for every government to overcome these deficiencies and to provide healthy drinking water and oxygen for human consumption.

To support the human body functions and its energy requirement the food should contain the so called "essential elements". These essential elements are partially entering the human body in liquid form.

Apart from the essential elements, the oxygen and water play an indispensable role for living things.

The Oral Oxygen Therapy (O.O.T.), as an innovation in medicine and biology, with promising prospects for treating different medical conditions, has been developed for the first time in 1970 by Prof. Dr. A. Pakdaman, M.D. This therapy was introduced in Germany in late 1988.

The oxygen enriched water has been applied in the nutritional, clinical and research medicine, to treat cellular hypoxia. As therapy, the oxygen enriched water was prescribed for people suffering from different diseases, such as migraine, heart arrhythmia, ophthalmological problems and cancer. Also, the therapy was used to improve blood pressure and to stimulate the immune system.

In 1993, the "Manfred Köhnlechner Stiftung", a German Research Foundation, has given its annual reward for the best research in biological and natural medicine in Germany, to Prof. Dr. Pakdaman M.D., for its Oral Oxygen Therapy work.

## APPLICATIONS

Oral Oxygen Therapy (OOT) can be applied by itself or in combination of other means under physician supervision. According to research conducted by several scientists, the combined OOT therapy has given the following effects:

- Stimulates and regulates the immune system (Leucocytes, Monocytes, Granulocytes, natural killer cells)
- Increases number of blood cells (erythrocytes, Hct, Hb, Platelets)
- Improves cellular hypoxia and oxygen utilisation disorder
- Converts anaerobic metabolism in cancer cells into aerobic one
- Has antibacterial and antiviral effects specially on anaerobic bacteria
- Addresses Gastrointestinal problems such as: heartburn, gastritis, gastric ulcer, duodenal ulcer, etc.
- Decreases the formation and secretion of acid gastric
- Improves micro circulation specially in the gastric and intestinal mucosa
- Regulates the function of  $H^+ / K^+ - AT\ Pase$  enzyme (proton pump).+
- Regulates stomach motility
- Activates and regulates the function of Lieberkuhn's and Brunner's glands
- Has cytotoxic effect on heliobacter pylori
- Effects on hypoxia such as asthma, silicosis, T.B., cystic fibrosis, chain smoking
- Prophylaxis and therapy of migraine due to reduction or elimination of cerebral hypoxia
- Increases the oxygen supply for the brain cells in the case of arteriosclerosis and brain tumor (11)
- Controls Angina pectoris conditions because of improvement of myocardial hypoxia, prevention of massive necrosis of heart tissues and heart insufficiency
- Acceleration of detoxification process of body because of activation of cytochrome P-450 in the liver
- Hypoventilation due to functional weakness of respiratory tract such as thorax injury, obstructive pulmonary disease or neuromuscular disorder such as poliomyelitis, myopathies and mechanical load to the respiratory systems such as massive obesity, kyphosis, kyphoscoliosos
- Improves granulation and regeneration of the tissue (wound haling)
- Improves quality of life
- Delays ageing process

This application of OOT is specially in those cases useful, because oxygen will be transported with this method directly into blood circulation by gastrointestinal tract and portal vein.

This method is characterised moreover by the following criteria:

- The water enriched with oxygen is consisting substantially of 2 existential components of nature, namely oxygen and water
- The molecular connection in this combination between oxygen and water is based on ionic binding, i.e. it is physically dissolved oxygen (7)

The absorption organ for this method is not the lung, but the mouth tissue and the gastrointestinal tract

- Approx. 5 minutes after oral treatment with oxygen enriched water an increased  $pO_2$ -value in the blood is observed
- This method can be carried out as additional therapy besides of conventional and other therapy-methods
- There has been no side effects detected up to now
- This method offers a broad spectrum of effects in the range of medicine, biology, nutrition, environment, and industry

## CELLULAR AND IMMUNOLOGICAL SIGNIFICANCE OF OXYGEN

Oxygen consumption is a signal of life.

All the biological and bio-energetic processes that take place in a cell are conditioned by the oxygen presence. Without oxygen, i.e. in hypoxic condition, the cell's functions are disturbed and its structure is deteriorated.

The function of immune cells, like phagocytes, is among others depending on oxygen. Phagocytosis, the activity of the phagocytes, as well as the production and consumption of energy in the cell are directly dependent on the oxygen partial pressure.

When oxygen therapy is applied, an improvement of the body defence system is observed, due to the stimulation and stabilisation of the immune system.

Some factors such as: chemotherapy, radiation, post operative syndrome and stress can trigger hypoxia-lack of the oxygen in the cell. This condition will result in energy deficiency in the cell and a disturbed immune system and therefore must be addressed by an adequate therapy.

As a result of the oxygen enrichment process, the energy level of a fluid is considerably increased, which in terms will allow a more effective source of energy when ingested.

## ABSORPTION

Absorption of oxygenated water begins in mouth tissue and along the gastrointestinal tract. By diffusion and osmosis, the oxygen utilising the isotope  $O_2^{15}$ , have shown the relationship between the amount of blood received by brain and how effective the oxygen was utilised. This is the result of the active oxygen transport. (8)

As a result of the oxygen enrichment process, the energy level of a fluid is considerably increased, which in terms will allow a more effective source of energy when ingested.

About 5 minutes after drinking of oxygen enriched water an increase of the  $pO_2$  value is observed in venous blood. In contrast to oxygen supply via a mask the effect of oxygen applied as an aqueous solution lasts for several hours. Even after 3 to 4 hours still an elevated oxygen content in the blood is observed.

Resorption of oxygen occurs in following way.

Oxygen enriched water → capillaries of the mucous membranes of mouth and gastrointestinal tract → portal vein → liver circulation → body circulation → increase of  $pO_2$  in the blood → reaching of organ of destination via the haematogenous way

## ONCOLOGY

The effect of Oral Oxygen Therapy (OOT) in the therapy of head and neck carcinomas has been measured by  $pO_2$ -histography. (1)

The measurement of oxygen partial pressure in tissues has been done by Kimo  $pO_2$ -histography equipment. With this method the oxygen partial pressure has been measured with a  $pO_2$  micro sond.

This way, it was possible to measure and register the increase in oxygen concentration in cancer cells after Oral Oxygen Therapy (OOT) according to Pakdaman.

Eble, M.J. et al (2) reported the results obtained in 20 patients, who had been treated previously by radiotherapy against lymphogene metastasised mount bottom and pharynx carcinomas.  $pO_2$ -measurement was carried out before and 5 minutes after treatment with 300 ml oxygenated water (60 mg  $O_2$ / l). A  $pO_2$ -increase in the blood could be detected 5 minutes postprandial. After further examinations an increase tumour oxygenation was detected.

It could be demonstrated, that the increase in oxygen concentration in cancer cells made the cells sensitive against chemical therapy and radiation, therefore helping the destruction of cancer cells. (4)

In 32 patients with previously treated with surgery, radiation, and/ or chemotherapy were treated with pharmacological doses of sodium selenite as the whole blood selenium level were subnormal in 70 % of patients. In 76 % of patients a definite and in 24 % a slight improvement of the general condition and a decrease of symptoms such as nausea, emesis, headache, vertigo, unsteady gait, speech disorders and Jacksonian seizures were observed. Additional beneficial effects were observed in patients receiving the oxygen

therapy. (A. Pakdaman 1998) (11)

Several studies indicating that hypoxia of tumortissue at various malign diseases will have a negative effect on the whole lifecourse of the patient including free of recidivism.

Furthermore tumoroxygenation and revision of anaemia could slow down and even retard tumoragression.

In a study with 182 female patients with mamcarzinon, which has been trated with zytostatica, showed a significant better free of recedivism survival of such woman, which Hb-value was higher than 10 g/ dl, comparing with female patient with Hb-values under this value. (Fortbildung Tumorthapie, Universitat Heidelberg 1/2000) (3)

Therefore, OOT can play a very important role in any conventional or biological therapy destined to increase oxygen concentration in cancer cells.

## HEADACHE

Headache is a frequent human pain disease. In Germany there are approx. 500 different pharmaceuticals against headache on the medical market. Americans yearly use 15 billion headache pills. For the generation of headaches, including migraine attacks, micro circulation disorder and cerebral hypoxia play decisive roles.

## CLINICAL DOCUMENTATION

For a documentary study 12 patients with headache, consisting of 8 woman between 21 and 45 years and 4 men between 32 and 46 years have been examined and treated for approx. 6 weeks by Oral-Oxygen-Therapy (OOT) according to Pakdamen. Patients suffered from headache, migraine-attacks, tension-headache, hypotonia, dysmenorrhoe, orthostasia etc. The daily dose for the Oral-Oxygen-Therapy was 0,33 l water enriched with oxygen 2-3 times a day.

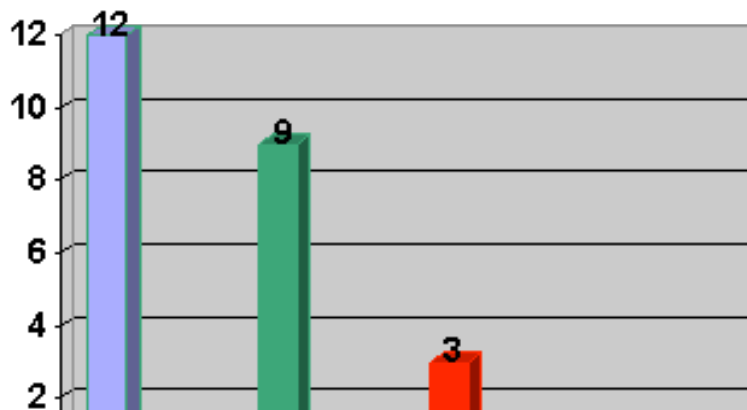
Seven of eight female patients had migraine headache and one had tension headache. Two men of four had migraine and one had tension headache. The fourth had a gliom left temporal.

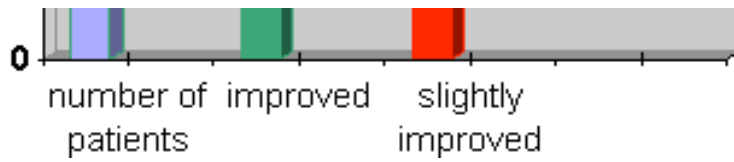
**Table 5: Results of therapy after Oral-Oxygen-Therapy (OOT) according to Pakdaman of 12 headache patients**

Diagnosis	No. of patients	female	male	Result of Therapy			
				improved female	improved male	slightly improved female	slightly improved male
Migraine	9	7	2	6	2	1	
Tension-headache	2	1	1		1	1	
Gliom left temporal	1		1				1
<b>Sum</b>	<b>12</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>3</b>	<b>2</b>	<b>1</b>

**Fig. 3: Results of therapy after Oral-Oxygen-Therapy (OOT) at 12 headache-patients (n=12), suffering from:**

migraine 9  
tension-headache 2  
gliom left temporal 1





## EYE DISEASES:

### PATIENTS AND METHODS

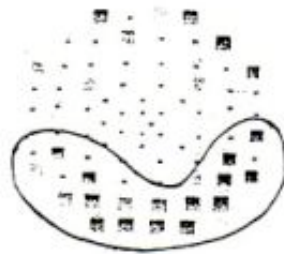
In the range of a documentation 6 patients with eye diseases, 3 female patients in the range of 56 and 81 years and 3 male patients in the range of 53 and 76 years has been examined and treated 4 weeks ambulant with Oral O<sub>2</sub>-Therapy (OOT) according to Pakdaman and afterwards their relevant datas has been controlled. As antioxidants and radical captur the patient was treated with vitamin A, E, C and Zinc. Under consideration of the diagnosis basically the relevant diseases was intra-ocular pressure, vissum, faceara and front eye section as well as cornea-alterations.

#### CASE PRESENTATION

53-year old patient with sicca-sydrom and gland-papillae has been treated 4 weeks with Oral Oxygen Therapy. After treatment a subjective and objective improvement was documented.

Computer-perimetry before and after OOT:

**Fig. 4: By computer-perimetry evidenced defect before OOT (53-year old Patient)**



**Fig. 5: By computer-perimetry evidenced distinct decrease of scotom in faceara after OOT (similar patient)**



**Table 6: Status of the patient before and after OOT**

Diagnosis	Condition before OOT	Condition after OOT
Sicca-Syndrom	Increased intra-ocular pressure	Decreased intra ocular pressure
Gland-papillae	T right 20 mm Hg	T right 13 mm Hg
	T left 19 mm Hg	T left 13 mm Hg
		Improvement of Faceara and visus
		More vital papillae- Stability of psychis

### RESULTS OF ECG BEFORE AND AFTER ORAL OXYGEN THERAPY (OOT) ACCORDING TO A: PAKDAMAN AT PATIENTS WITH CARDIAC ARRHYTHMIA

In the course of a clinical study 6 patients with heart failure (cardiac arrhythmia), 2 female and 4 male patients in the age between 41 and 70 years have been cardiologically examined and treated with Oral Oxygen Therapy (OOT). (13)

After OOT significant improvements could be evidenced and documented.

**Table 7: Results of longterm ECG according to Lown classification and different values before and after Oral Oxygen Therapy**



(OOT) at patients with cardiac arrhythmia.

Pat.	Age	Diagnosis	Lown-Changes	
			before OOT	after OOT
1	42	Cardiac arrhythmia, VES, Hypotonia	Lown IV a	Lown II
2	70	Cardiac arrhythmia, massive SV-Tachycardie, Hypotonia, Vertigo, Osteoporosis of spine	Lown III b	Lown I
3	52	Cardiac arrhythmia, VES, Hypotonia, heavy headache, Vertigo	(Bigemia) Single VES	No VES
4	60	Cardiac arrhythmia, massive VES, status after. ACVB at 3 vascular, CHD, Hypotonia	Lown IV	Lown III a
5	41	Cardiac arrhythmia, CHD at 3 vascular Hypotonia, Angina pectoris	Normal	Normal
6	64	Cardiac arrhythmia, VES, CHD, Hypotonia, LHH, status after ACVB and hip joint operation	Lown IV a	Lown III a

**Table 8: Results of exercise ECG and different values before and after Oral Oxygen Therapy (OOT) at patients with cardiac arrhythmia**

Pat.	Age	Diagnosis	Exercise ECG	
			before OOT	after OOT
1	42	Cardiac arrhythmia, VES, Hypotonia	75 W	100 W
2	70	Cardiac arrhythmia, massive SV-Tachycardie, Hypotonia, Vertigo, Osteoporosis of spine	50 W	75 W
3	52	Cardiac arrhythmia, VES, Hypotonia, heavy headache, Vertigo	100 W	125 W
4	60	Cardiac arrhythmia, massive VES, status after. ACVB at 3 vascular, CHD, Hypotonia	75 W	100 W
5	41	Cardiac arrhythmia, CHD at 3 vascular Hypotonia, Angina pectoris	100 W	150 W
6	64	Cardiac arrhythmia, VES, Hypotonia, LHH, status after ACVB and hip joint operation	75 W	100 W

**Fig. 6: Improvement of heartcapacity after treatment with oxygenated water**

Watt

