

MACULAR DEGENERATION (AGE RELATED) AND BEMERtherapy

Macular degeneration is a disease that occurs mostly in old age - initially only in one eye - that is accompanied by a progressive partial or full loss of central visual acuity. The loss of vision is limited here to sharp detailed vision (reading, recognising details); the peripheral visual field and the orientation capacity are preserved. AMD does not lead to blindness but can represent a considerable impairment so that blind aids may have to be used.

The disease is caused (according to the current state of knowledge) by overtaxing of certain cell structures and metabolic disturbances in the area of the retina.

Through a reduction in the efficiency of the so-called pigment epithelial cells that are responsible for the transportation of specific metabolic end products, deposits of these are caused around the yellow spot (location of the sharpest vision). This limits visual capacity, and in the later stage damage and loss of retinal tissue can also occur. This is known as *dry Macular Degeneration* that progresses relatively slowly, now and then can also stagnate - and makes up about 80 % of all Macular Degeneration.

In the case of the second form, fast progressing *Wet Macular Degeneration*, the membrane that seals in relation to the choroid becomes leaky in damaged places so that fluid and proteins enter. The consequence is the new creation of blood vessels that grow in a loop-like manner and haemorrhaging that destroys the retina.

As a rule the disease is not noticeable until the later stage when it causes blurred or grey spots when reading, distortions as well as reduction in visual acuity and changes in colour vision. Both forms of Macular Degeneration are pain-free. In the case of regular check-ups of the rear of the eye, the typical deposits and possible newly formed blood vessels can be recognised at an early stage.

Through enlarging visual aids like magnifying glasses and special glasses that can be made to suit each individual as well as electronic reading devices, reading ability can be preserved for longer or shorter periods depending on the progression of the disease. The victim is usually no longer able to drive a motor vehicle.

Despite intensive debate with regard to the given problem area, there is currently no treatment for dry AMD and only for a small number of patients with wet AMD are satisfactory treatment procedures available.

Both laser treatment in which the newly formed blood vessels are "obliterated" depending on their position, and photodynamic therapy can only be applied in the case of a minority of patients with wet AMD. With these methods the course of the disease cannot be stopped and even in the case of patients who are initially successfully treated, a 50% relapse rate is recorded within one year. The procedure of retinal rotation, which is still in the trial phase, is a very complicated and expensive operation in which the retina is completely freed from its base. On the basis of an appropriate rotation, an intact retinal area can be fixed above the yellow spot.

So-called membrane differential filtration offers a new therapy approach. This is a procedure in which a functional improvement in the metabolic situation in the eye can be achieved through improvement in the flow properties of the blood (plasma viscosity, whole blood viscosity, erythrocyte aggregation among others). As the most recent studies show, this allows for an increase in vision.

BEMER Therapy is a treatment method that can contribute to the optimisation of the metabolic situation of the entire organism through complex effective mechanisms.

The significant proven effects with the widest ranging scientific import are as follows:

1. Increase in the reaction readiness of molecular and sub-molecular structures in the organism through a previously unique broadband signal form, by which a broad spectrum of chemical reaction processes is generally facilitated (Kafka, W. A.).
2. Electromagnetically induced "switching on" of HSP 70, the consequence of which is a synthesis of special repair proteins (Jelinek, R.), improved and shortened wound healing (Preissinger, M.), delayed occurrence of muscular soreness after anaerobic stress (Spodaryk, K.).
3. Boost in blood circulation right through to the microcirculation (Michaelis, H.), the consequence of which is an increase in oxygen partial pressure and the unpacking of erythrocytes (Malkomes, Ch.) in the blood. Improved metabolism of red blood corpuscles through the filling of the ATP depot and other energy-rich phosphate depots (Spodaryk, K.).
4. Lowering of blood pressure, reduction in pulse rate and vegetative relaxation (Michels-Weikili, S.).

The sum total of these reactions and the positive experiences with the treatment of diabetic macro and micro angiopathies are the foreground discussion of whether the influence on blood circulation and the blood flow properties through BEMER Therapy could, aside from the known effects, also have a very positive effect on the trend in age-related Macular Degeneration.

For the time being the use of BEMER Therapy can also be recommended for AMD although the question of potential AMD-specific treatment successes cannot be answered as there are no documented figures from experiences with the treatment available to date.

Based on the experience with other metabolic diseases or blood circulatory disorders, a treatment period of about six to eight weeks should be planned.