4. Variants of the oxygen multistep therapy

4.1 Overview and common aspects

At present there already exist *numerous procedural variants of the O_2MT*. It is the aim and effect of nearly all variants that the *blood microcirculation is "highly charged" over a period of months up to years*. They are therefore designed, on the basis of measurements on many hundreds of volunteers, in terms of type, administration and timing of the steps, in such a way that the probability is high that in the individual patient case the bioenergetic triggering of the discovered cellular capillary wall switching mechanism with dilation of the narrowest capillary cross-sections will take place. The procedural variants differ from one another mainly in the *type, in the administration and in the timing of the 3rd step*, which determines the strength of the circulation, especially the cardiac output (COP). *Quick procedures* or *short procedures* result when the COP is temporarily increased by physical exertion or by stimulating drugs, as explained in Paragraph 1.1.10. However, these variants cannot usually replace the 36 h O_2MT (standard) procedure. Some variants allow for the combination of procedures and combination with additional steps (e.g. with the HOT*-UVR method) to intensify the effect. This great variety enables the medical practitioner to *adapt the therapy to the individual patient to a large extent*. This important role of the doctor requires him to have an overview of the scientific foundations of all measures and combination of measures used in the O_2MT. The physiological and technical details have been presented in the previous chapters of this book in order to help here. For the same reason Table **23** gives *an overview of the different procedural variants of the O_2MT and the oxygen multistep immunostimulation (O_2MI)*. See Appendix for the most recent 5x20 min O_2MT short procedure, GK 3-I.

The relation to the strength of the effect, i.e. to the *certain crossing of the switching threshold of the capillary switching mechanism*, explained in Paragraph 1.1.1.2, applies to all procedural variants. It is absolutely essential for the restoration of a good O_2 supply to the endothelial cells at the venous capillary end by means of diffusion, that *as high a level of the $P_{O_2\text{-ven}}$ as possible* is brought about during therapy. This is achieved by the generation of a high $P_{O_2\text{-art}}$ (high O_2 offer adjusted to the respiratory minute volume, RMV), and by a high capillary blood-flow $\dot{Q}$ (high COP, physical exertion, no implementation of the procedure during periods of circulatory weakness except in special emergency variants). The absolute level of the $P_{O_2\text{-ven}}$ and, when the procedure is fractionated, the time relation K of the procedure time (sum of the treatment hours) to the total duration of the procedure, determine the *total duration of treatment required*. For example, K = 36 h/432 h = 0.0833 for the 36 h 18 day (= 432 h) O_2MT procedure GK 4, and for the O_2MT quick procedure GK 2, without fractionation K = 15 min/15 min = 1.0. Since the value K considerably influences the amount of time and O_2 required for the respective variant, the notion of *time efficiency* and, in Paragraph 1.1.1.2, the notion of *efficiency exponent* was introduced. The influence of the time relation K can be explained by the fact that, in the usually considerable pauses between the individual sessions of treatment, the endothelial cells in the deficient zone at the venous capillary end swell up again slightly. The negative influence of longer pauses between the sessions (e.g. no treatments at weekends) was also reflected in measurements of the P_{O_2} at rest. The timing of the procedure should theoretically be so designed that as little time as possible remains for a retumescence of the endothelial cells (especially in the first phase of treatment before the switching threshold has been reached). This instruction can only be followed up to a certain extent, however, because other considerations (physical disablement, no stress capacity) force a compromise in the question of "time efficiency".

The recommended programming of the different variants is given in this section of the book in the framework of a unified basic scheme, with details of the type, administration and temporal organization of the individual steps.