

Explanation to the article

“Effects of Zeel comp. on experimental osteoarthritis in rabbit knee”
(Stancikova M. et al.)

Background

The effects of medicines on complex pathological processes (such as rheumatic disease) are generally difficult to demonstrate. One reason for this is that their course often differs widely from one patient to another, thus presenting a considerable obstacle to a precise and complete evaluation of the process at the time of investigation. A further problem in investigating the action mechanisms of medicines is finding sufficient numbers of patients for clinical trials who show as similar a pathogenesis as possible and are e.g. at the same stage of the disease. However, an objective demonstration of the way in which drugs exert their effects is particularly desirable when it is a matter of finding medicines with the fewest possible side effects whose intended effects are sufficiently strong.

Options

One way of standardizing the test conditions is to switch to cell cultures. These only allow certain aspects of diseases to be investigated, however, if the systemic influence of the medicine on the totality of processes in the organism is to be investigated, a study in an animal model is generally the only option. But animal studies cannot be considered relevant unless the causes and pathogenetic mechanisms are sufficiently similar to those of the human disease. A considerable advantage of the animal study is the absence of a placebo effect. This aspect is particularly important for medicines whose effects are often dismissed as imaginary, as frequently happens with homeopathics.

The model

A recognized animal model of osteoarthritis with high transferability of the results to humans is the induction of an analogous disease picture in rabbits via experimental destabilization of the knee joint (surgical division of the cruciate ligament). This model was adopted by an international working group (German-Slovak-Hungarian) to permit a more precise evaluation of the effects of a homeopathic combination product on the development and progression of osteoarthritis.

Study design

The rabbits were divided into two groups, of which the first received only the solvent while the second received the test product (Zeel comp., manufactured by Biologische Heilmittel Heel GmbH, Baden-Baden). Both the control solution and the test product were injected intraarticularly (twice weekly) in accordance with the instructions for administration of Zeel comp. Each group was treated for 9 weeks. The treatment was followed by macroscopic examination of the joint surface and microscopic (histochemical) evaluation of the tissue structure of the cartilage layer.

Results

While the control group showed macroscopically evident erosions and the picture of a hypertrophic cartilage surface, the group treated with Zeel comp. showed much less noticeable changes in surface structure. The histochemical investigations confirmed these initial findings: the deeper cartilage layers in the control group treated only with solvent were strongly vascularized. This parameter too showed clear superiority of the Zeel treatment, only a few blood capillaries being detectable in the Zeel group. Finally, whereas the control animals showed largely unstructured tissue, the group treated with the test product showed not only a virtually normal arrangement of the chondrocytes but also an only slightly altered cartilage border.

Conclusions

By administering the homeopathic injection solution Zeel comp. in accordance with the instructions in an animal model broadly corresponding to human osteoarthritis, the damage to the articular cartilage can be almost entirely prevented. Since a placebo effect can be excluded in this model and the pathophysiological mechanisms correspond to those of the human disease, it may be inferred that the existing good empirical experience with the clinical use of Zeel comp. is due to genuine effects of the

medication and not to imaginary effects.

Biologische Heilmittel Heel GmbH
February 2000