



AMNIOCLIP+, AN EASY TO USE EYE PATCH

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SUMMARY

Surface defects of the eye can lead to defects of the cornea, are often difficult to treat and can lead to clouding of the cornea with subsequent visual loss or blindness. In wound healing consuming and tedious ointment and dripping therapies are necessary which require hospitalization. As a very good treatment in addition to the pharmacological therapy, in clinical practice the sewing of amniotic membrane has proved. The amniotic membrane is donated and recovered after caesarean delivery (caesarean section) and can be stored lyophilized or cryopreserved for some time. Currently ophthalmologists graft tissue by stitching it to a patient's eye. A significant disadvantage of this method is that the membrane has to be fixed with sutures on the ocular surface. In particular, the seam is an additional trauma to the patient since the ocular surface has been disturbed by the underlying disease and it causes more damage to an already irritated cornea.

To avoid this additional surgical trauma a method was developed to apply the amniotic membrane without surgical intervention to the ocular surface.

In an interdisciplinary team we realised a medical device for clamping the amniotic membrane in a ring system (AmnioClip), that can be used similar to a contact lens. A clamping device facilitates the handling of the thin amniotic membrane. There were only used materials that are approved by the Medicinal Products Act for use on humans. The ready-to-use combination of the medical product and the amniotic membrane (human tissue) -the so-called "AmnioClip-plus" -is prepared under clean room conditions in a Tissue Bank.

The AmnioClip plus with the prepared amniotic membrane may then be placed in topical anesthesia to the eye surface. Another advantage of this method is that the insertion of the AmnioClip-plus is easy to repeat and thus the treatment of other diseases such as the dry eye syndrome is also possible.