

METHOD FOR PREPARATION AND TRANSPLANTATION OF
VOLUTE GRAFTS AND SURGICAL INSTRUMENT THEREFOR

ABSTRACT

A method of transplanting a graft in the subretinal area of a host eye comprises preparing the graft by harvesting from the donor tissue a population of cells in a manner that maintains the population of cells in the same organization and cellular polarity as is present in normal tissue of that type. The population of cells are of a sheet-like form and are assembled with a relatively thin flexible pliable carrier composed of a non-toxic flexible composition which substantially dissolves at body temperature to form a graft. The graft is sufficiently flexible and pliable to be coiled to form a volute without disturbing the organization and polarity of the cells. The method further comprises coiling the graft to form a volute with the convolutions of the volute free of one another for subsequent uncoiling of the graft substantially to its original sheet-like form. An incision is made in the host eye for insertion of the volute. The incision in the eye is smaller than the incision that would be required for insertion of the graft in its uncoiled sheet-like form. The volute is inserted one end first into the host eye through the incision and transported to a position between the retina and the underlying tissue. The volute uncoils after its insertion to lie in sheet-like form between the retina and the underlying tissue of the host eye. The incision is then closed.

(Figure 20)