THE HISTOLOGY OF IATROGENIC KERATITIS BULLOSA

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ABSTRACT

Histological examination can differentiate between Fuchs' dystrophy of the cornea and the bullous keratopathy which occurs after cataract extraction, with or without the implantation of an artificial lens. The differences are apparent in Descemet's membrane and the endothelium. In 89% of cases there was agreement between the histological and the clinical diagnosis.

INTRODUCTION

Between 1977 and 1979 perforating keratoplasty was performed on 65 patients on account of a Fuchs' keratitis bullosa following cataract extraction with or without the implantation of an artificial lens. A histological study was performed on the resemblances and differences between Fuchs' corneal dystrophy and the iatrogenic keratitis bullosa. On the basis of the findings two lists of anomalies were compiled and the material was reexamined, this time without knowledge of the clinical history. The characteristic differences are mainly to be found in Descemet's membrane and endothelium. In 89% of cases the histological diagnosis was in agreement with the case history.

MATERIAL

Of the 65 patients, on whom keratoplasty was performed for keratitis bullosa, 17 had clinically a primary Fuchs' corneal dystrophy, 18 had keratitis bullosa following cataract extraction and 30 had keratitis bullosa following cataract extraction and the implantation of various types of intraocular lenses.

METHOD

The corneal discs, trephined during the keratoplasty, were fixed in 10% neutral buffered formalin, laminated and embedded in paraffin, and routine 5μ microscopical sections were made. This work was carried out in the Pa-

Fig. 1. Epithelium in keratitis bullosa following lens implantation: irregular structure, intracellular oedema (arrows), intra-epithelial bulla (b). Bowman's membrane (between broad arrows) is intact. Stroma (s) more or less normal. HE.

Fig. 2. Epithelium in Fuchs' dystrophy: irregular structure, intracellular oedema (arrows). Bowman's membrane (between broad arrows) intact. Stroma (s) scanty keratocytes. HE.

Fig. 3. Prolonged keratitis bullosa following cataract extraction: irregular epithelial structure, intracellular oedema (arrows), pannus (p), s = stroma. Bowman's membrane (between broad arrows) intact. HE.