Corneal grafting in pediatrics

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&nclusion- 95 -CONCLUSIONCorneal transplantation in children is challenging ill many ways. Thesechallenges can be divided into preoperative, intraoperative, and postoperative.Preoperative challenges arise from the fact that, typically, both a child and his or herparents are more anxious about the procedure than would be an adult. Additionally,o taining preoperative data on children is much more difficult than doing so ona' ults. Checking visual acuity may take seconds in an adult but is a more involvedpocess in a child. Some younger children may even require assessment of visualeyoked potentials for the best evaluation..~Intraoperative challenges arise in part from the fact that children's corneas andanterior segments are smaller. This crowding effect can make the surgical proceduremore complicated. Children's corneas also are thinner and more pliable than those ofadults, resulting in more difficult surgery. They have decreased scleral rigidity,which can lead to intraoperative collapse of the scleral wall and a deformed globe.Proper suturing of the donor tissue might be affected, and suprachoroidal hemorrhagerriight ensue. A child's iris is more adhesive than is an adult's and can adhere to the'~~p~sterior cornea and the wound. Patients with congenital or traumatic abnormalitiesJy have significant anterior segment abnormalities, which will add to the difficulty!of the surgical procedure. Finally, the vitreous is more tenacious in children; the lens~d the iris may move forward during surgery, leading to dramatic and spontaneousextrusion of the lens.Postoperatively, children may develop a severe inflammatory response. Fibrincan exude from the iris and make the assessment of the anterior chamber or retinadifficult. A strong immune reaction in children makes them more likely to experienceendothelial graft rejection or graft failure. Because wound healing is faster inchildren than in adults, the sutures can erode and become vascularized and theniJifected. To minimize both astigmatism and infection, sutures must be removed-- ---~_.COnclusion - 96-earlier than in adults. Because examining children in the office may prove difficult,t~~ physician may need to obtain information through multiple visits, to rely onsuboptimal examination, or to perform an examination under anesthesia. Childrencannot communicate such problems as pain, loss of vision, or other symptoms. Theydepend on their parents to "guess" their problems, take them to emergency rooms oreye appointments, and apply their medications.Children also are more likely to traumatize their graft by simply rubbing oraccidentally injuring their eyes. The wound can be easily stressed and split open.Many surgeons choose a graft that is 0.5 rom larger than the trephination site toobtain good closure.A crucial aspect of postoperative care is amblyopia management. The operationis only the first step in

a long series of interventions to treat amblyopia. However, thesurgery itself can be arriblyogenicin that the patient will need postoperative patch foran extended period. In addition, if the graft is edematous or a high refractive error isinduced, amblyopia will develop. Refraction must be performed by retinoscopy, andthe refractive error must be corrected as soon as possible. Exuberant rejection is thefinal factor that makes postoperative care difficult.No matter how advanced techniques become, there are three fundamentalprinciples will remain unchanged.1. The parents ofthe child must be included in all decision making and thereforemust be fully informed,2. .If the ocular tissues of the child are treated like those of an adult’s, failure willalways be a real possibility.3,Visual rehabilitation after surgery cannot be ignored.