Case Report

Cataract Surgery in Haemophilia

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Introduction

With ageing, haemophilia patients will increasingly suffer from age-related diseases. A typical disease of the elderly is the development of cataract. The main treatment of cataract is surgery with removal of the opaque lens and placement of an artificial intraocular lens. This surgery is considered a low-risk procedure with a little risk of bleeding. However, preoperative evaluation is mandatory for all patients, especially the elderly with comorbidities Adequate blood pressure is necessary to prevent suprachoroidal haemorrhage. Bleeding can be a serious problem and difficult to manage in haemophiliacs undergoing surgery. Guidelines on cataract surgery in haemophilia patients are lacking. To date, there are no reports on the use of or need for clotting factor cover during cataract surgery.

Case report

A 60 year-old diabetic with severe haemophilia A (F VIII level <1iu/dl) was admitted in Al-Shifa Trust Eye Hospital, Rawalpindi for cataract surgery. His vision was 6/36 in his involved right eye with no signs of diabetic retinopathy. Preoperative laboratory investigation showed Factor VIII coagulant activity was below 1 IU/dL. His inhibitor screen was negative.

Cataract surgery on the right eye was performed under topical anaesthesia. Tranexamic acid 500mg QID was started one day before surgery and continued for 7 days. Immediately prior to surgery Factor VIII concentrate 1500 i.u (25 iu/kg) I/V Stat was given in order to prevent bleeding complications such as suprachoroidal haemorrhage which is a rare complication of cataract extraction by phacoemulsification (0.03%) in non-haemophilic patients. He underwent an uncomplicated cataract extraction by phacoemulsification and implantation of intraocular lens. A topical anaesthesia was administered. The surgical procedure lasted 10 min. No bleeding occurred during this period. After surgery, the patient received Factor VIII concentrate 1000 i.u (15 iu/kg) I/V for next 2 days. The postoperative period was uneventful, neither bleeding nor any other side effects, such as thrombosis, occurred.

Discussion

This case report shows that FVIII concentrate is effective in preventing bleeding in haemophilia patients undergoing cataract surgery. The patient who has severe haemophilia A was successfully treated with F VIII concentrate during cataract surgery under topical anaesthesia. Tranexamic acid was also given concomitantly without any side effects. The total number of doses was three. In view of the minimally invasive character of topical anaesthesia compared with peribulbar anesthesia. Cataract surgery has evolved over the last decades to a minimally invasive procedure using phacoemulsification and microincisions with topical or sub-Tenon’s anaesthesia. The bleeding with modern cataract surgery is low, but is increased in patients with bleeding disorders, such as patients on vitamin K antagonists (anticoagulants). In these patients most bleeding is clinically insignificant such as subconjunctival haemorrhage or dot hyphaema. Rarely a retrobulbar bleed occurs with serious vision loss. Current American College of Chest Physicians (ACCP) guidelines describe to continue anticoagulants during cataract surgery, with a preoperative check if the international normalized ratio is within the desired therapeutic range in patients taking vitamin K antagonists (grade 1C). Studies on cataract surgery that were analysed in the ACCP guidelines reported bleeding complications in patients continuing anticoagulation therapy, although not consistently and always in light of the thrombotic risks. As haemophilia patients obviously lack the medical (thrombotic) indication for having hypocoagulation, extrapolation of the ACCP guidelines to haemophilia is hampered and the risk of bleeding complications might be underestimated.

In a recent study analyzing 16 hemophiliac patients that had undergone surgery clotting factor correction was not required when topical or sub-Tenons anaesthesia was given in patients with mild haemophilia FVIII or IX levels >0.15 IU mL/1. In case of retrobulbar anaesthesia, it was recommended to correct the clotting factor deficiency shortly before
surgery aiming at clotting factor levels between 0.80 and 1.00 IU mL/1 and trough levels 0.15 IU mL/1 for 24 h regardless of haemophilia severity; in most patients this can be realized with a single infusion. Unpredictable bleeding complications may occur, however, leading to vision loss in severe haemophiliacs with high-titre inhibitor.6 As blindness is a serious potential complication of postoperative haemorrhage, we recommend topical anaesthesia as an additional measure to minimize retrobulbar and conjunctival bleeding. In patients with factor VIII/IX levels <0.15 IU mL/1 undergoing topical anaesthesia, there are no data to support the need for or omission of clotting factor correction. Until further data become available, we will administer a single infusion with clotting factor aiming at top levels of 0.30–0.40 IU mL/1 to prevent bleeding in these patients.

In cases with high-titre inhibitor other therapy may be necessary with inhibitor by passing agents such as prothrombin complex concentrates (activated), porcine factor VIII or recombinant factor VIIa (rFVIIa). Among these, rFVIIa has the advantage of lack of immunogenecity and risk of transfer of human viruses.7,8 Thus, Factor VIII administration seems to be a safe and effective agent in the management of cataract surgery, in haemophiliacs, under topical anaesthesia. Since very few cases have been reported so far, our experience may provide some contribution to the management of this surgical procedure in haemophiliacs.

References