

Recurrent haemorrhage following chalazion incision and curettage in a patient with chronic kidney disease

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ABSTRACT

Chalazia are commonly seen as eyelid lesions caused by inflammation of the meibomian glands. Most chalazia resolve spontaneously or with medical treatment. Incision and curettage are required for chalazia that persist even after medical management. Even this simple outpatient department (OPD) procedure, if not performed with utmost caution and considering all the systemic factors, can have dire consequences.

We present a case report of a patient with known hypertension and stage five chronic kidney disease (CKD) on maintenance hemodialysis presented with multiple chalazia on the lower lids of both eyes. He underwent an uneventful chalazion incision and curettage for both the eyes three days apart.

Hemodialysis was done five days later, after which the patient had profuse bleeding from the wound site. Bleeding was temporarily controlled with a tight pressure patch, but the patient continued to have intermittent bleeding the next day. All hematological parameters were within normal limits except for slightly decreased hemoglobin, and the patient was treated systemically.

Knowledge and treatment of the factors impairing hemostasis in patients with CKD help reduce the risk of perioperative bleeding. It is essential to be vigilant in such a situation to manage any untoward complications.

KEY WORDS: chalazion; curettage; hemorrhage; bleeding; chronic kidney disease; hemodialysis

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INTRODUCTION

Chalazion surgery is a relatively commonly performed minor surgical procedure having minimal or no postoperative complications. Complications that do develop are often easily managed. This case report details the atypical case of a middle-aged male with known stage five chronic kidney disease (CKD) who developed severe recurrent bleeding from the site of chalazion surgery six days following the procedure.

CASE PRESENTATION

A 32-year-old male presented with a chalazion on the lower eyelids of both right and left eyes that had failed to resolve on medical therapy. The patient gave a history of hypertension of 10 years. He was also diagnosed with stage five CKD for five years, for which he underwent periodic hemodialysis maintenance. Ocular examination otherwise proved to be normal. Hematological inves-

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tigations performed before the procedure showed a normal coagulation profile and platelet count. The patient underwent uncomplicated chalazion removal from the left lower lid, followed by the right lower lid 3 days later. Follow-up in the immediate postoperative period was uneventful. The patient underwent hemodialysis once in the days following the procedure.

Six days later, the patient presented to the emergency room, reporting the sudden onset of severe profuse bleeding from the left eye, which had started an hour prior. Vital signs on patients' arrival were blood pressure of 130/80 mm Hg, heart rate of 76 bpm, and respiratory rate of 20 cycles per minute. The patient's left eye was covered with a gauze dressing soaked with blood. On removing the dressing, blood was seen steadily oozing from the site of incision and curettage. A tight pressure patch was applied, and bleeding gradually reduced over a period of 20 minutes. The right eye was examined and found to be normal. The wound appeared healthy, and there were no signs of bleeding from the right eye.

At this point, the patient was admitted to the hospital, and blood samples for hematological investigations were collected. The reports showed hemoglobin of 10.5 g/dL, packed cell volume (PCV) of 31.5%, and an elevated erythrocyte sedimentation rate of 56 mm/hr. All other hematologic laboratory parameters were normal, including clotting factors, prothrombin time, partial thromboplastin time, international normalized ratio, and platelet count.

Following this patient had 3 further episodes of recurrent, profuse bleeding from the left eye at approximately 3 hourly intervals. The pressure was applied over the eye to stem the bleeding, and a tight bandage was applied following each episode. The patient was administered one dose of injection protamine sulfate 10 mg and transfused with two units of fresh frozen plasma. The bleeding gradually reduced, and the patient had no further bleeding episodes for almost 10 hours afterward. The patient was then started on systemic intravenous antibiotics in addition to his regular antihypertensive medication.

The following day, he developed another major bleeding episode after almost 10 hours. This time pressure was applied, and simultaneously an absorbable hemostat (oxidized regenerated cellulose, Surgicel®) was cut into a 1 x 2 mm strip and placed in the lower fornix. Bleeding gradually

stopped, and a tight pressure bandage was applied after removing the Surgicel®. Repeat hematologic laboratory investigations were sent after this episode and showed a fall in hemoglobin to 8.3 g/dL and PCV to 25.7%. The coagulation profile was found to be normal. The patient was transfused with three more units of fresh frozen plasma.

The patient continued to be monitored daily, and the eye pressure was patched. He had minor spotting of the dressing but no further major bleeding. He underwent heparin-free dialysis on the fourth day and was hemodynamically stable at discharge.

DISCUSSION

Chalazion is a commonly seen condition in the clinic. It occurs due to chronic inflammation of the meibomian glands. Surgery for its removal is a widely performed minor procedure to treat chalazion when conservative treatment has failed [1]. Complications following this procedure rarely occur. Postoperative bleeding following the procedure is one such complication that is usually mild and occurs within 24 hours [2].

Renal failure is a condition often associated with an increased incidence of hemorrhage in patients undergoing surgical procedures. In those with advanced kidney disease, platelet dysfunction is the leading cause of bleeding tendencies. Other conditions that impair hemostasis in these patients include anemia, dialysis, drug accumulation due to poor renal clearance, and anticoagulant use during dialysis [3]. Knowledge and treatment of all these factors may help reduce the risk of perioperative bleeding in patients with kidney disease.

In the above-described case, the patient presented to the hospital almost six days following the procedure. The postoperative bleeding was atypical, being severe, recurrent, and profuse. The patient had pre-existing hypertension and chronic kidney disease, for which he was on regular hemodialysis. The patient also underwent dialysis once following the chalazion incision and curettage during which heparin was administered. Hemodialysis can contribute to the bleeding through the continuous platelet activation induced by the interaction between blood and artificial surfaces and the use of anticoagulants [4].

The performed hematological investigations showed hemoglobin of 10.5g/dL, PCV of 31.5%, and elevated erythrocyte sedimentation rate (ESR).

Heparin typically prolongs the activated partial thromboplastin time (aPTT) alone but at high levels it can prolong both prothrombin time (PT) and aPTT. Thus, aPTT is considered a more sensitive version of the PTT and is used to monitor the patient's response to heparin therapy. Heparin exposure can also cause heparin-induced thrombocytopenia, a rare, immune-mediated complication [5]. However, in the current scenario, clotting factors, PT, aPTT, international normalized ratio (INR), and platelet count were normal.

The bleeding, in this case, may have been a result of platelet dysfunction, hypertension, or abnormal vessels if the lid. However, the blood pressure never exceeded 130/80 mm Hg during the stay in the hospital, and there was no untoward complication intraoperatively. Performing heparin-free hemodialysis is one measure that can be taken before and following the procedure to ensure that no untoward complications may occur. Placement of Surgicel® in the wound could have resulted in clot retraction and arrested the bleeding.

CONCLUSION

It is common practice to ensure that systemic conditions are optimal before surgery, but this sit-

uation highlights its importance before proceeding with any minor or major procedure. Though chalazion incision and curettage is a commonly performed office procedure, complications do occur and must be managed systemically and locally for optimum response. This is especially so in the setting of CKD.

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Conflicts of interest

None declared.

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