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HEMOPHILIA, AN IMPORTANT CAUSE OF POST CIRCUMCISION BLEEDING IN CHILDREN

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ABSTRACT

Objectives: To assess the magnitude of hemophilia (bleeding disorder) in patients with post circumcision bleeding.

Material and Methods: A 6 month retrospective study (January 2011 to June 2011) was conducted at pediatric surgery unit of Khyber Teaching Hospital, Peshawar. Bleeding due to injuries to Glans penis or phallus was excluded from the study and such patients were referred to plastic surgery department Khyber Teaching Hospital.

Result: A total of 31 patients were included in this study. Sixteen patients were having simple vascular bleeding and 15 had bleeding due to hemophilia. All the circumcisions were performed by non qualified circumcisers.

Conclusion: Awareness about hemophilia (bleeding disorders) among the general public and persons involved in practice of circumcision is needed to avoid post circumcision bleeding due to hemophilia.

Keywords: Circumcision, bleeding, hemophilia.

INTRODUCTION

Circumcision is the excision of the preputial foreskin. The word circumcision is derived from Latin circum means around and caedere means to cut. It is the oldest surgical procedure by mankind[1] practiced by the Egyptians of 3,000 B C. In Jewish and Muslim communities circumcision is a religious ritual[2], while in western countries about 80% of male circumcision has medical reasons[3]. The worldwide prevalence of circumcision is between 20-30%, mainly for religious and cultural reasons. In cases like phimosis and posthitis circumcision is recommended.

Circumcision is very common in Pakistan owing to majority Muslim population. This procedure is mainly performed by barbers, technicians and untrained paramedical staff without anesthesia and without proper aseptic measures leading to high complication rate in such cases[4,5]. The complication rates vary from 1-15%[6]. Most of them are minor, but sometimes major complications can occur[7]. Hemophilia is X linked recessive coagulopathy and its severity is defined by Factor VIII level in plasma. Hemophilia is characterized by repeated and prolonged bleeding episodes. Hemophilia severity is defined by Factor VIII level in plasma, severely affected individuals have <1% of normal, moderate 1-5% of normal and mild >5 -<40% of normal[8].

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In our province most of the children with post circumcision bleeding are referred to our unit for management. Bone cutter is mainly used for circumcision in our province without using any suture material for ligation of vessels. Purpose of the study is to evaluate the children with post circumcision bleeding specially due to bleeding disorders like hemophilia A and to manage them properly.

MATERIAL AND METHODS

This was a retrospective study which was carried out at Pediatric Surgery Department of Khyber Teaching Hospital, Peshawar from January 2011 to June 2011. All patients with post circumcision bleeding (acute complications) were included in the study. Data including name, age, weight of the patient, investigations like hemoglobin, PT/APTT, bleeding time and platelet count, blood group, technique of circumcision and family history of any bleeding disorder were recorded on a proforma.

RESULTS

A total of 31 patients with post circumcision bleeding were referred and admitted to Pediatric Surgery Unit, Khyber Teaching Hospital, Peshawar during the six month study period (January 2011-June 2011). Age range was between 6 days and 4 months (mean age 33 days). Majority of the patients presented within 18 hours of circumcision. Median body weight was 5 (3-8) kg. Hemoglobin gm% at the time of admission were shown in Table 1.

Table 1: Levels of haemoglobin percentage

S. No.	Level of Hb%	No. of patients and percentage
1.	8-10gm%	17 (54.83%) patients
2.	Above 10 gm%	10 (32.25%) patients
3.	Less than 8gm%	4(12.90%) patients

PT was normal in all patients. APTT was deranged in 15 patients. Bleeding time and Platelet count was normal in all patients. All fifteen patients had positive family history of hemophilia. Patients were divided into two groups, one with simple vascular bleeding and the second with bleeding due to bleeding disorders mainly factor VIII deficiency. Sixteen patients (51.6%) were included in the first group and 15(48.38%) patients in the second group.

In the first group bleeding was controlled either by simply changing the dressing or application of adrenaline soaked gauze or ligating the bleeding vessel with fine sutures like vicryl 4/0 or catgut 4/0, or using bipolar diathermy under local or general anesthesia in the Operation Theatre. In the patients with bleeding disorder like hemophilia in which all the above measures failed, FFP and Fresh blood was given initially and if not controlled then factor VIII was given. Only one patient needed factor VIII injection (Anti Hemophilic Factor). Remaining 14 patients were managed with fresh blood and FFP. The patient who required Anti Hemophilic Factor was re admitted twice. Anti Hemophilic Factor injection was given and was discharged after a week. Eight patients needed blood transfusion (25.8%): Patients were transfused blood if hemoglobin was less than 9 gm%.

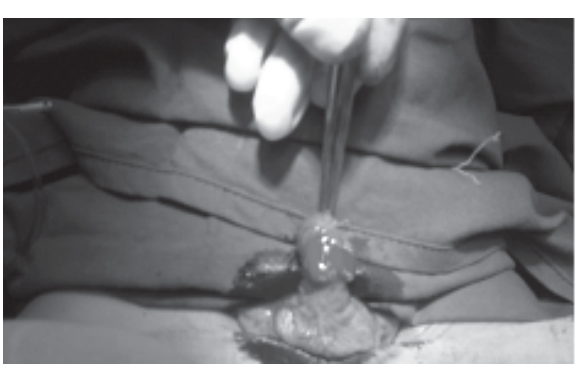

Figure showing: Post circumcision bleeding, no application of sutures, bone cutter was used for circumcision.

DISCUSSION

Circumcision is the most common surgical procedure performed throughout the world[9]. Only few epidemiological studies have reported frequency of adverse events, most commonly bleeding and infection[10]. In most parts of the Muslim world circumcision is performed by untrained traditional circumcisers[11]. In certain parts of the world, all the circumcisions are done outside the hospital[12]. In our study all the circumcisions were performed outside the hospital. In our set up circumcision is done at an early age, one of study supported this opinion that neonatal circumcision is pain free and carries minor complication rate[13], while another study suggested that neonatal circumcision carries high complication rate and should be done after 6 months of life[14].

Complication rate especially bleeding rate is quite high in circumcision done outside the hospital by untrained circumcisors[15] and varies from 1-52%[16]. In our study patients in whom there was simple vascular bleeding and BT, CT and PT/APTT were normal measures like application of gentle pressure, change of dressing, adrenaline soaked gauze sponge to the bleeding site, and silver nitrate stick were successful in 10 patients (62.5%) and only 6 patients (37.5%) needed suture ligation or use of bipolar diathermy for control of bleeding.

Bleeding in circumcision due to bleeding disorders (hemophilia) is common in our community and has catastrophic effects if missed with a high morbidity and mortality[17]. In our study 15 patients were having hemophilia (48.4%). Four (80%) patients were managed by using simple measures to control bleeding like transfusing Fresh frozen plasma, and fresh whole blood. One patient (6.66%) needed factor VIII injections in a dose of 15 iu/kg body weight. If such cases are referred to hospitals before circumcision (positive family history of bleeding), good results can be achieved by proper management[18,19]. Availability of fibrin glue and pre operative injections of factor VIII, tranexamic acid DDAVP has decreased the risk of bleeding in hemophilia, and it is easy to recognize healthy and hemophilic patients[20]. Different protocols are available for managing such patients before circumcision[18]. In our study eight patients (25%) needed transfusion especially who presented late and hemoglobin was below 9 gm%, our rate of blood transfusion was quite high compared to international literature[21].

CONCLUSION

Post circumcision bleeding due to hemophilia may lead to disastrous consequences. Therefore it is mandatory to properly investigate patients for hemophilia especially if there is family history before the procedure.

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