

# Safe circumcision in hemophilia Patients: The Kenyatta National Hospital (KNH) experience, Nairobi Kenya

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## Introduction

Social and cultural integration of hemophilic boys into society through circumcision is one of the most important cornerstones of modern hemophilia therapy. Circumcision, a traditional procedure, is an important ritual for most communities across the world including Muslims and Jews. It remains an important social problem for the hemophilia patients and their families due to the danger posed by the disorder characterized by excessive bleeding following trauma. As a treatment facility in Kenya offering treatment services to hemophilia and other bleeding disorders, it became paramount that a safe rite of passage through surgical circumcision was initiated and coordinated by the clinicians.

## Objective

To evaluate safe circumcision procedures for hemophilia patients attending the Hemophilia Comprehensive Care Center at Kenyatta National Hospital.

## Methods and Materials

The Kenya Hemophilia Association launched a “safe circumcision” campaign in 2014 through various local available media at Kenyatta National Hospital. This led to an influx of patients seeking this service at the hospital premises. Due to inadequate availability of factor concentrates, patients were advised to register for the procedure pending availability of factor concentrates. A total of 26 known hemophilia A and B patients were enrolled with 20 benefiting from the procedure.

All patients were admitted through the surgical clinic in consultation with the hematologists and appraised for surgery. Mandatory for all was a vial of plasma sample taken pre-concentrate infusion and another post-concentrate infusion after 30 minutes. Both samples were analyzed for APTT for confirmation of the hemophilia and confirmation of correction pre-operatively. 60% correction was targeted for all patients receiving the factor concentrates. Circumcision procedures were undertaken successfully. Factor concentrates were given once daily post operatively for one week while in hospital and every second day thereafter for another week while at home. By-passing agents were administered for one patient with inhibitors

## Results

The average age of the patients was 13 years with arrange of 5-21 years. 20 boys tested gave a correction of above 50% after 30 minutes of factor administration and therefore proceeded with the surgical circumcision. The hospital stay period was 3-7 days except for one 21 year old boy who stayed for 3 weeks after developing inhibitors. Factor concentrate usage ranged from 10000 IU-40000 IU depending on the age and weight of the patient.

## Discussion

The cost of factor concentrate used ranged from USD 250-USD 400 which is far less compared to other setups that may have recorded costs of upto USD 7000. This could partly be due to the young age of our population enrolled for the circumcision procedures and minimal complications including development of inhibitors. A lot of diagnostic errors as well as determination of patients with possible inhibitors was quickly excluded through an APTT done 30 minutes post-factor concentrate infusion. This assay also boosted the confidence and reaffirmation to the surgeons of a successful procedural outcome. Tranexamic acid as an adjuvant therapy was administered preoperatively and post operatively while the patient was on factor concentrates. All patients were discharged following consultations and on confirmation of true healing of the wounds.

## Conclusion

The program was able to realize successful operations that have so far been cost effective especially with the young age groups. More patients have enrolled for the services and will benefit in the future programs.

## Recommendations:

A protocol evaluating other circumcision procedures may need to be developed and evaluated while young age interventions enhanced for better management of the patients.

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