Improving Quality VMMC

SA bleeding disorder review

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Jhpiego

Outline

- Case Summary
- Management of the SAE
- Implication for future care
- Looking the SAE from a QI perspective

Clinical Case Summary

- On April 9, 2013 , a 15 year old client received a VMMC service after client has gone through standard screening, history and physical examination
- Immediately after the circumcision, the bleeding from the fresh wound continued despite careful hemostasis using both diathermy and sutures
- The team did a re-exploration within two hours , removed clots and stopped any bleeders they could see and sutured the wound and admitted the client for 24 hour post circumcision observation

Clinical Case Summary

- The following morning, the client continued to have bleeding and developed pallor although hemodynamically stable

- He was given IV R/L, and one unit of whole blood, and on further history, the team learned that the client is a known hemophilia A patient on regular follow up, but neither the guardian nor the client saw the relevance of that to the circumcision, and no one in the clinic asked

Lab report

Specimen received: EDTA blood
Tests requested: FBC

Full Blood Count:

White Cell Count	7.50	x 10^9/L	4.00 - 10.00
Red Cell Count	2.73 L	x 10^{12}/L	4.89 - 6.11
Haemoglobin	6.9 L	g/dL	14.3 - 18.3
Haematocrit	0.223 L	L/L	0.430 - 0.550
MCV	81.7 L	fL	83.0 - 101.0
MCH	25.3 L	pg	27.0 - 32.0
MCHC	30.9 L	g/dL	31.5 - 34.5
Red Cell Distribution Width	16.8 H	%	11.6 - 14.0
Platelet Count	368	x 10^9/L	150 - 400
MPV	8.5	fL	7.0 - 11.4

Referral

- The VMMC team decided to refer the client to a different hospital for assessment by surgeon and hematologist for further management

- The nearest hospital had no bed available so client was referred to a facility a bit further

Specialty care

- The receiving hospital consulted with a hematologist and started the client on FVIII
- Bleeding has stopped and client was enrolled in outpatient follow up for post circumcision wound care and hematologic care

Case Audit

- The team identified multiple gaps in the system that resulted in the occurrence of this case
  - Client card had no specific question on bleeding history
  - The nurse who did the screening didn't ask specific questions as discussed in the training program
  - The doctor who performed did not confirm the clients history or contraindications before the procedure
  - The client and parents reported that they always provide answer to the specific questions asked
  - The facility had limited lab supplies to perform coagulation profile

Bleeding related AEs

- Most typically occur in the first 72 hours after surgery
- Those occurring later are often associated with trauma to the genital area or early commencement of masturbation or sexual intercourse.
- The primary cause is a previously unidentified or newly disrupted bleeding vessel

Classification

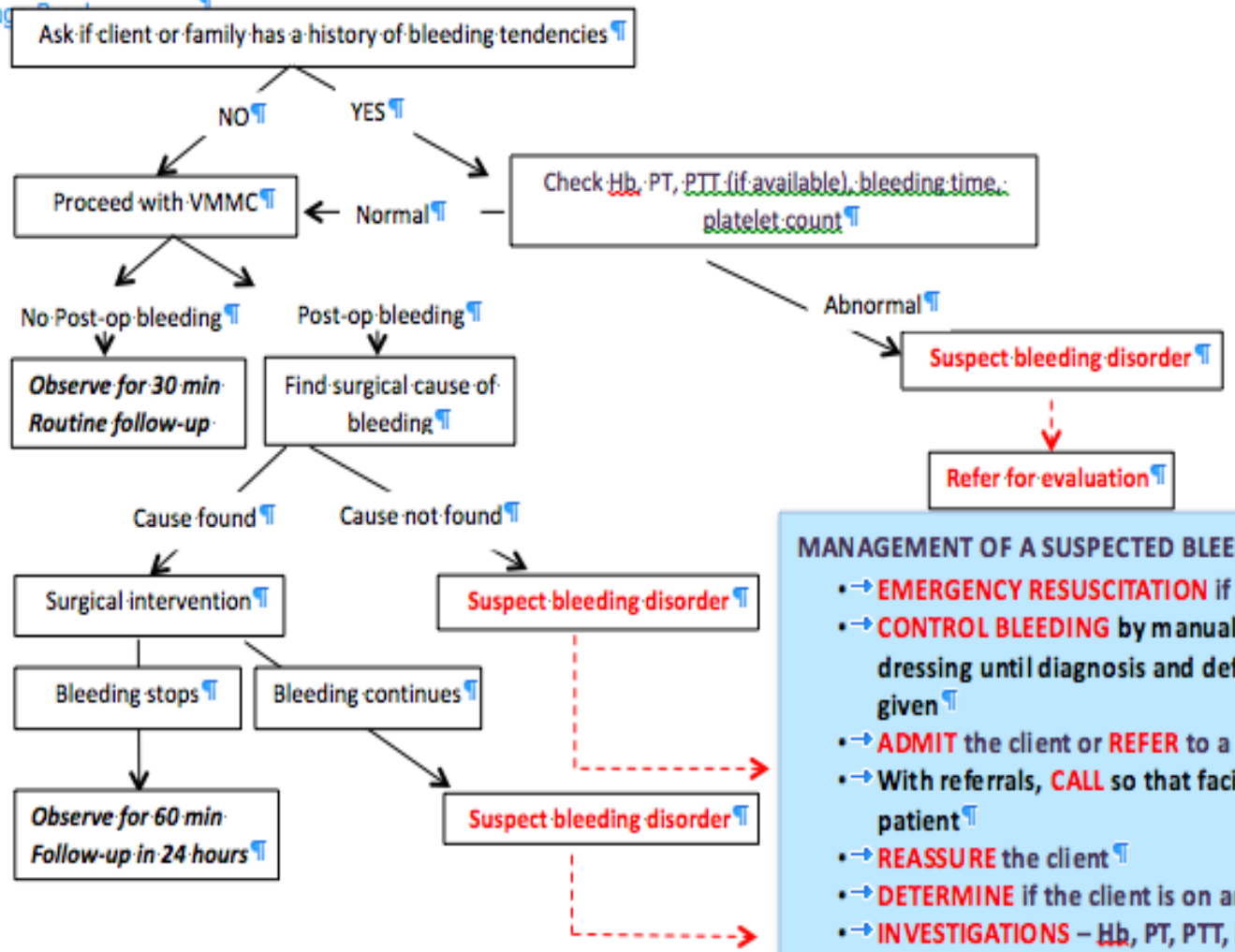
Time of occurrence:

- Intra-operative or immediate postoperative bleeding
- Post-operative bleeding

Severity

- Mild, moderate and severe.

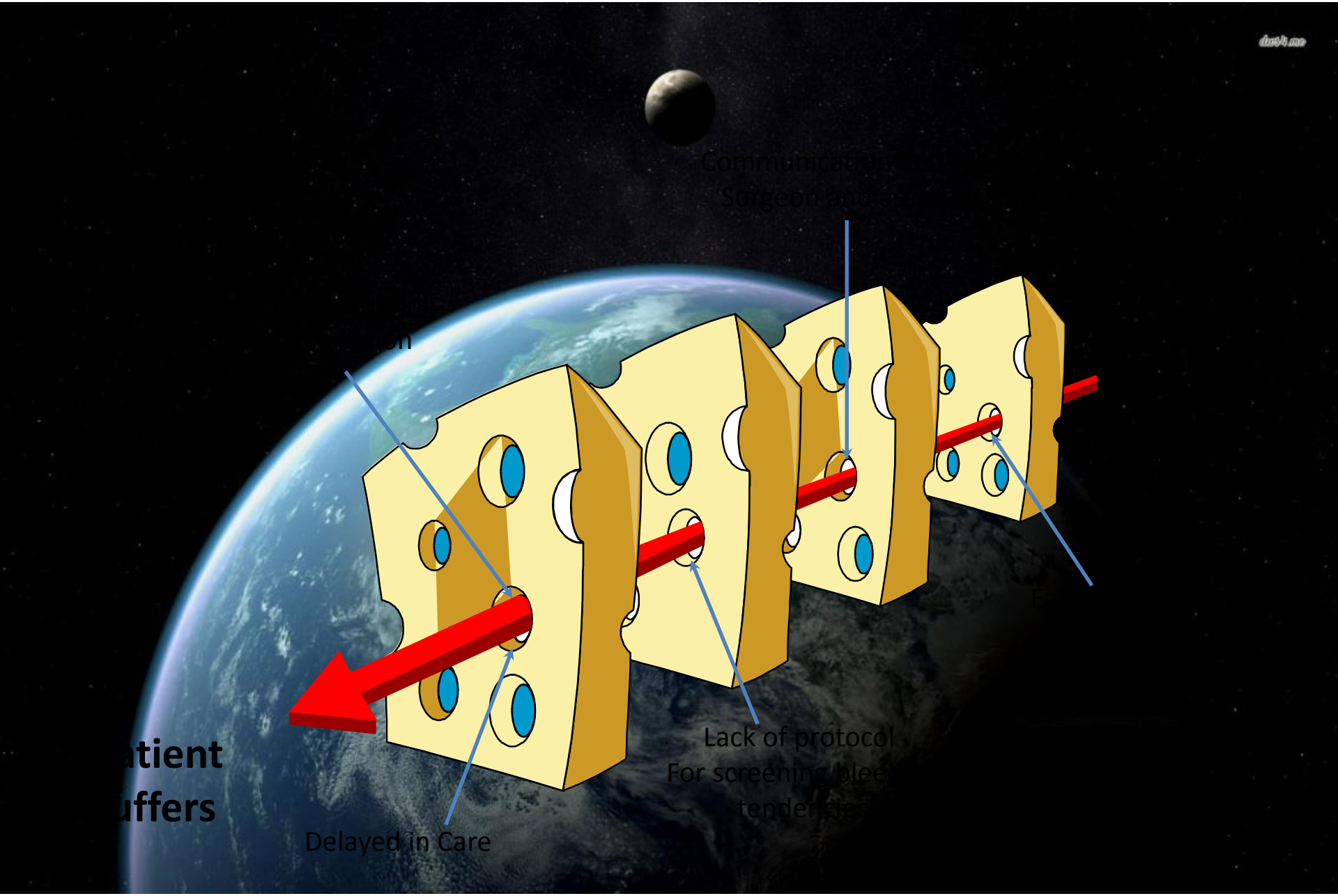
ALGORITHM FOR PREVENTION AND MANAGEMENT OF ACUTE BLEEDING AFTER MC



MANAGEMENT OF A SUSPECTED BLEEDING DISORDER:

- → **EMERGENCY RESUSCITATION** if in hypovolemic shock
- → **CONTROL BLEEDING** by manual compression and/or pressure dressing until diagnosis and definitive treatment can be given
- → **ADMIT** the client or **REFER** to a higher facility
- → With referrals, **CALL** so that facility can get ready for the patient
- → **REASSURE** the client
- → **DETERMINE** if the client is on anticoagulant therapy
- → **INVESTIGATIONS** – Hb, PT, PTT, bleeding time, platelet count, blood type and crossmatch
- → **BLOOD TRANSFUSION** if hypotensive since Hb may be normal after acute bleeding
- → **MANAGE** according to the cause –e.g. Vitamin K, clotting factors, FFP, platelet transfusion etc.

Adapted from JHPIEGO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A Common Challenge

- According to the WHO, tens of millions of patients worldwide suffer disability or death due to unsafe medical care annually
- Estimated adverse event rate of approximately 10% across healthcare
- Preventable harm causes up to 440,000 deaths per year in US hospitals, making it the third leading cause of death
- Approximately 45-66% of these adverse events are related to surgery

James JT. A New, Evidence-based Estimate of Patient Harms Associated with Hospital Care. Journal of Patient Safety. 2013; 9(3):122–1.
Gawande AA, et. al. The incidence and nature of surgical adverse events in Colorado and Utah in 1992. Surgery 1999, 126:66-75.
Zegers M, et al. The incidence, root-causes, and outcomes of adverse events in surgical units: implication for potential prevention strategies. Patient Saf Surg 2011, 5:13.

Prevention and management

- Obtain and record medical history
- Early recognition of abnormal bleeding
- Apply pressure
- Get help when needed; referral plan in place
- Management by experienced surgeon with medical back up

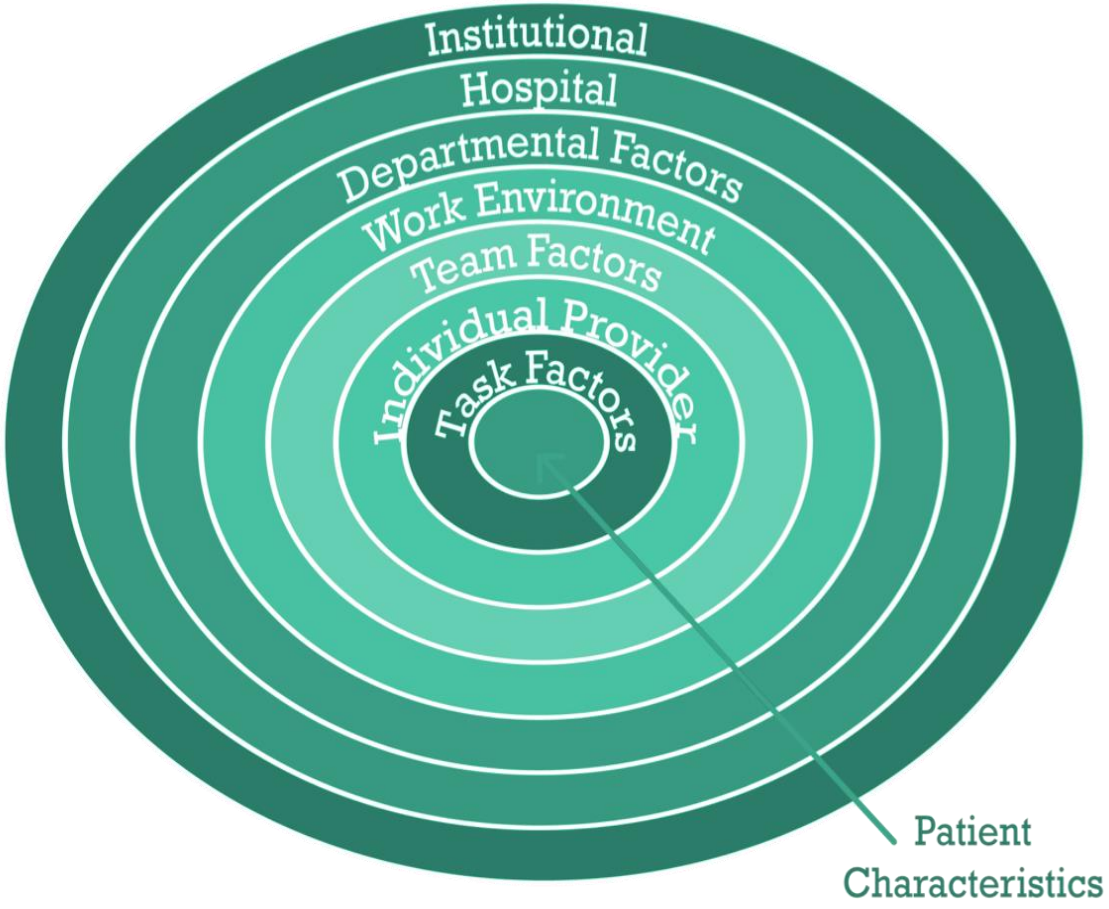
Treatments

- Platelet transfusions
- Fresh frozen plasma
- Cryoprecipitate
  - Factor VIII, vWF, Fibrinogen
- Inhibitors of fibrinolysis
  - Amicar, tranexamic acid
- DDAVP
  - Desmopressin, release of factorVII

Summary

- Bleeding post MC is among the commonest AEs
- Can be significantly minimized by careful history taking to rule out clients with bleeding disorders
- A VMMC encounter may be the first time a bleeding disorder may be diagnosed
- Costs incurred to programs for not paying attention to prevention may affect the programs

System Factors Impact Safety of Patients



Adopted from Vincent

Improving Quality VMMC

Recap

- Every system is designed to achieve its anticipated results
  - Develop lenses to see systems, using approaches such as - QI
- Safety and quality designs can be standardized by create independent checks, and learning from each “defects”
  - Infuse these principles of standardization and independent checks in your processes

Questions?

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