

AN UNUSUAL CAUSE OF BLEEDING

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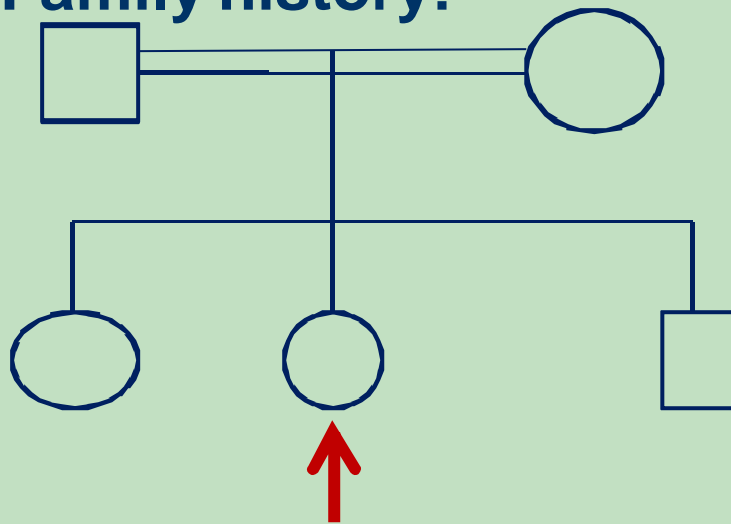
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- On Day 1,
- 10 year old female child
- Bleeding from oral cavity – 3 days
 - around 100ml
 - 3 to 4 episodes/ day
- History of swelling of Right cheek – 1wk
- No H/o hematemesis or melena or other bleeding manifestations
- No H/o trauma, fever

Past history:

History of bleeding from oral cavity at 4 years of age
around 10 ml

Family history:



EXAMINATION:

Child conscious, oriented
afebrile

severe pallor/ no icterus

no cyanosis / clubbing

no lymphadenopathy

CVS & RS – normal

ABD- soft , no organomegaly

CNS – normal

Vitals stable – no shock

- On day 2, Child had profuse bleeding with hypotension and resuscitated with fluid boluses and 4 units of whole blood.
- Had bradycardia and CPR was done.
- With the above scenario –
bleeding diathesis
- Hematological work up was done, which was found to be normal.

Child had continuous pulsatile bleed from oral cavity from upper 2nd molar hence CT-PNS was planned.



Packing of the oral cavity was done by the ENT surgeon

CT- PNS:

lytic lesion with soft tissue density and bony expansion in right maxillary region

? **Root abscess with focal osteomyelitis**



OMFS (oromaxillofacial surgeon)opinion was obtained for the sclerotic lesion of the maxilla.

As the bleeding was pulsatile CT-angiogram was planned.

- Child had further several episodes of massive bleeding
 - resuscitated with saline bolus and blood transfusion
 - Packing of oral cavity was done each time.

DAY OF OCCURENCE

1

2

3

4

6

7

12

16

17

NO OF BLEEDING EPISODES

5

2

2

1

1

1

1

1

1

UNITS OF BLOOD TRANSFUSED(14)

4

2

1

1

1

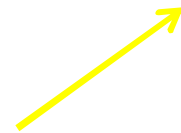
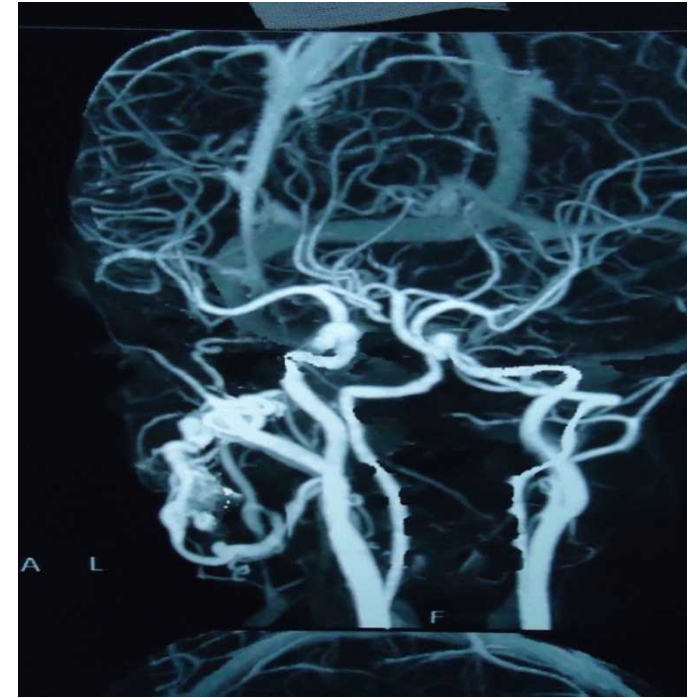
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1

2

1

CT angiogram of right maxillary region showed- high flow arteriovenous malformation of the right retromaxillary region with feeding from external carotid system.



- After discussion with vascular surgeon and OMFS surgeon the child was planned for surgery .
- Surgical resection of AV malformed lesion of the maxillary alveolus and external carotid artery ligation

INVESTIGATIONS

RFT,LFT: normal

PT & APTT:
normal

Bleeding time by
ivys method -2
mins & 20 secs

ECHO-normal

	1/2	2/2	3/2	6/2	10/ 2	15/2	17/ 2	23/2
Hb (g)	5.7	5.4	8	10	6.8	10.7	8	13.3
Pcv (%)	16.2	16.6	24	30	19	31	24	40
Plat (lak h)	1.3	1.2	2	2.6	4.2	3.2	2.6	2.8

Child was posted for surgery after getting assessment.

Vascular surgeon, OMFS surgeon & ENT surgeon were informed.

On the day of surgery ,the vascular surgeon advised that embolisation of internal maxillary artery would be a better option .

The child was shifted to radiology department
GGH immediately for embolisation.

At barnard institute of radiology – through right
**transfemoral approach therapeutic
embolisation** of right internal maxillary artery was
done using gel foam was done by the
interventional radiologist.

O day 24 , Although intensity of bleed reduced,
Child continued to have ooze requiring packing.

Once again ENT surgeon, vascular surgeon &
OMFS were organised for surgery

Under general anaesthesia, ligation of the feeding vessels of the AVM was done by vascular surgery team.

Removal of the AV malformation was done in toto along with the right maxilla by the OMFS team

- The child was shifted to ICU for post op care
- Post op ventilation was done for 1 day and extubated
- Frequent suctioning of oral cavity was done with daily change in oral pack
- Started on NG feeds on D3 and gradually started on liquid diet

ARTERIO VENOUS MALFORMATIONS

- Vascular defects caused by the absence of normal capillary beds
- Development of abnormal blood channels that connect the arterial circulation to the venous circulation.

- AVMs can be congenital or acquired
- Acquired are due to trauma or surgeries
- AVM of head and neck region is very rare
- Symptoms:
 - slowly growing mass
 - severe bleeding from the site
 - iatrogenic following tooth extraction

DIAGNOSIS:

- Plain x-ray and CT shows radiolucencies due to bony destruction by high flow
- CT angiogram is the investigation of choice

TREATMENT:

- Surgical resection is mandatory
- Embolization can be used preoperatively for acute control of the bleeding, but not as primary treatment .
- Complete resection of an arteriovenous malformation following embolization is the most effective treatment.

TAKE HOME message



Not all bleeds are
due to platelet or
coagulation
defects

Could be due to
vascular etiology