Epistaxis in Children

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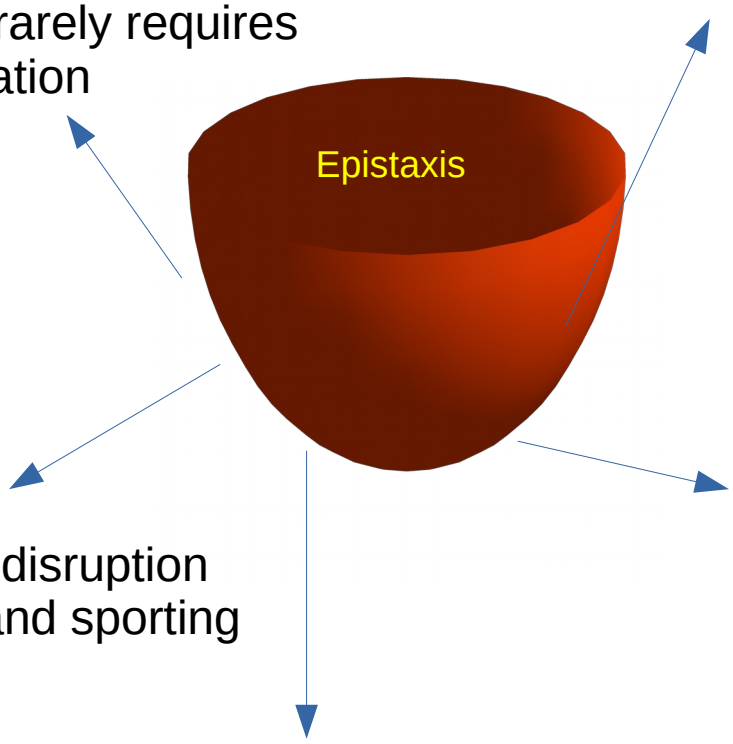
Derived from the Greek
Word epistazō meaning
Bleeding from the nose

Common problem in
Children, rarely requires
hospitalization



Can cause disruption
In studies and sporting
activities

Majority of nasal
Bleeds stop on
their own and can
Be managed
conservatively

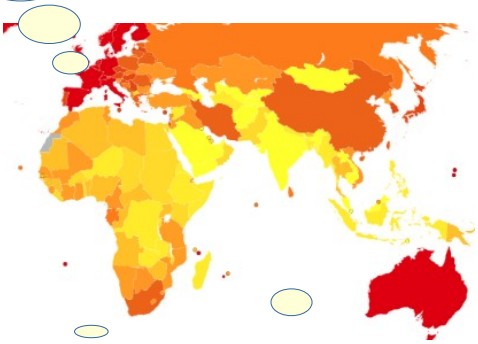
Recurrent nasal bleed could be very
Distressing to the child and parents

Epidemiology

60% of children would
Have had at least
One episode before
The age of 10

Shows bimodal distribution
First peak in children
Below 10 years and
In adults above 50 shows
The second peak

9% of children
Have frequent
epistaxis



Epistaxis in a child under the
Age of 2 is very rare and
If present should
Lead to suspicion of
Bleeding diathesis
Or injury

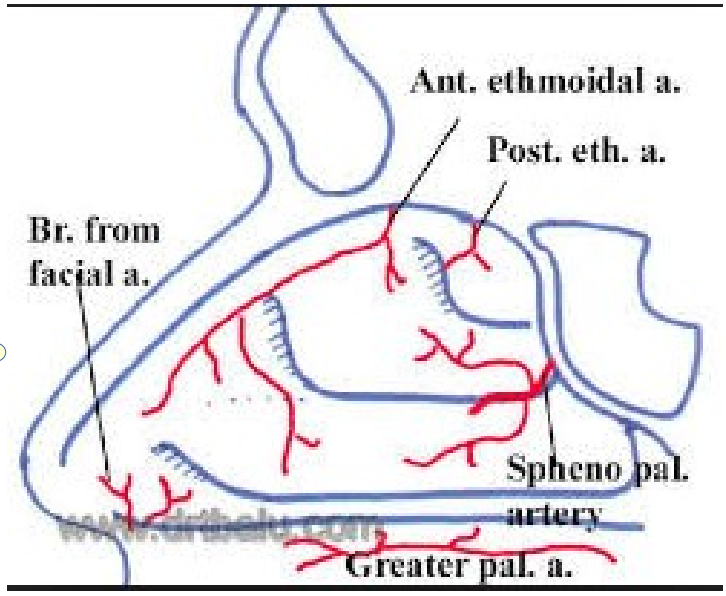
Incidence of recurrent
Epistaxis is higher
During winter
months

Location

Anterior nasal bleeds are very common
And are seen in 90%
Of patients

Little's area / Kieselbach's plexus
Anastomosis of septal branches of 5 arteries:
1. Anterior ethmoidal artery
2. Posterior ethmoidal artery
3. Sphenopalatine artery
4. Greater palatine artery
5. Superior labial artery

Little's area
Is anastomosis
Between external
& internal
Carotid systems



Commonly arises from the nasal septum either from the Little's area which is a rich vascular anastomotic area in the Submucosal portion of the antero inferior portion of nasal Septum. It could also arise from a prominent retrocolumellar Vein which also lies in the antero inferior portion of the Nasal septum.

Pathogenesis

Precursor is commonly
Local dryness over
little's area

Dryness cause
Crusting of mucosa
Leading to
Bleeding when crusts
Fall off

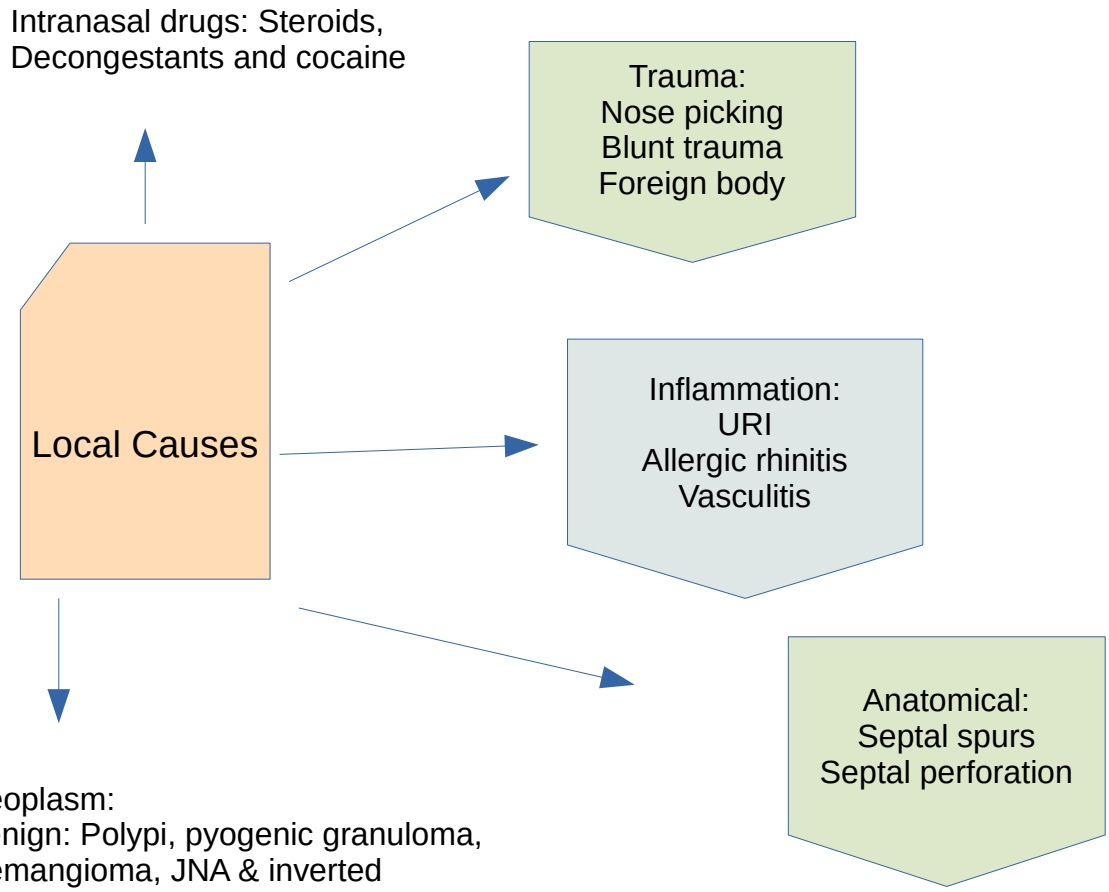
Most of the epistaxis are labelled as idiopathic. Current studies reveal that they are caused due to infection of the nasal mucosa involving staph aureus which is known to cause low grade inflammation of nasal mucosa. Release of inflammatory mediators due to chronic inflammation is known to cause neovascularization of nasal septal mucosa giving rise to potential bleeding spots.

Neovascularization may be seen as prominent vasculature over the septal mucosa in its antro inferior portion.

Histology:

Shows thin walled arterioles and capillaries with a surrounding inflammatory exudate.

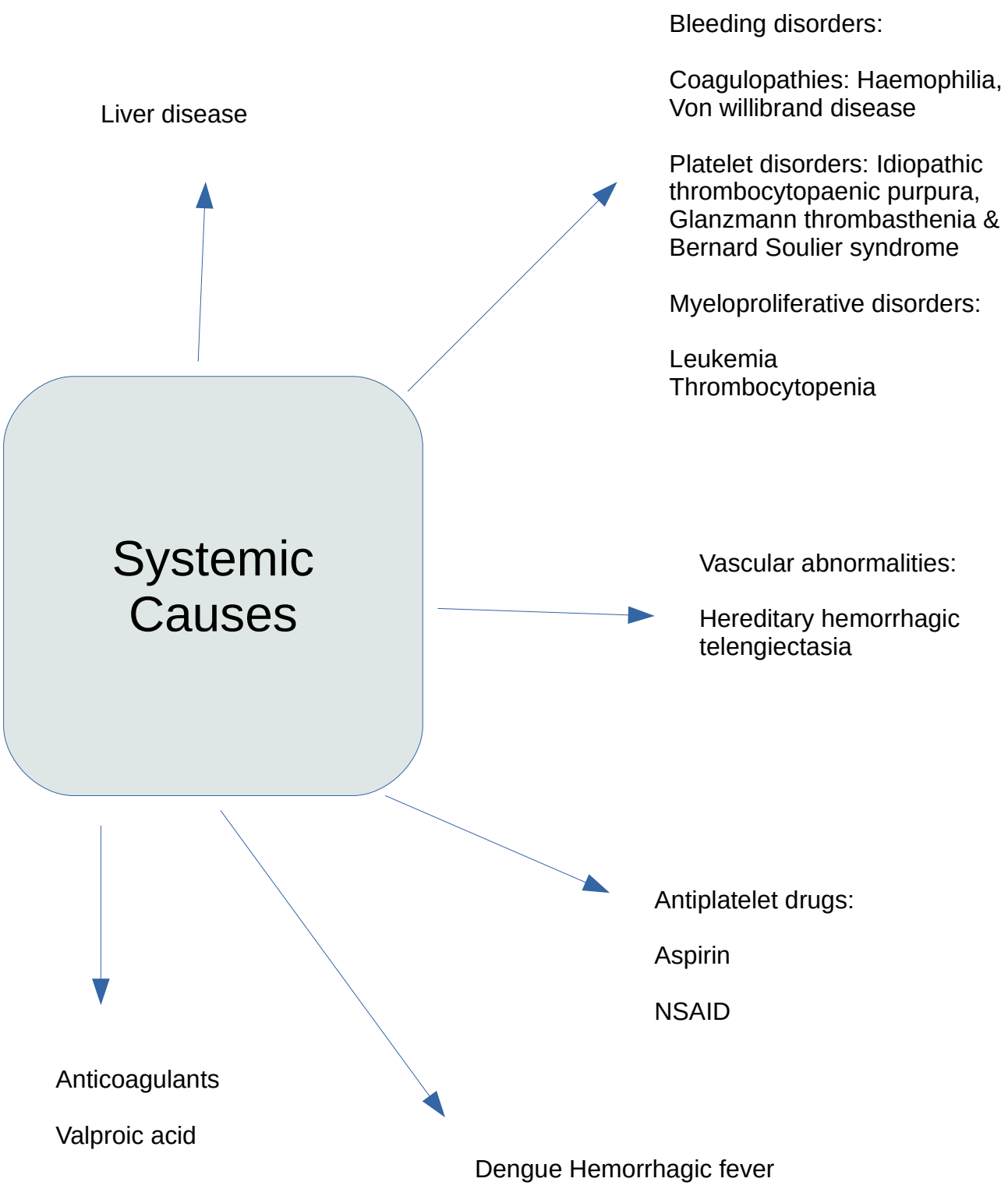
Aetiology



Neoplasm:
Benign: Polypi, pyogenic granuloma, Hemangioma, JNA & inverted papilloma.

Malignant: Rhabdomyosarcoma, NPC, and lymphoma

Aetiology Systemic causes



Tumors causing Epistaxis

Nasopharyngeal angiofibroma:

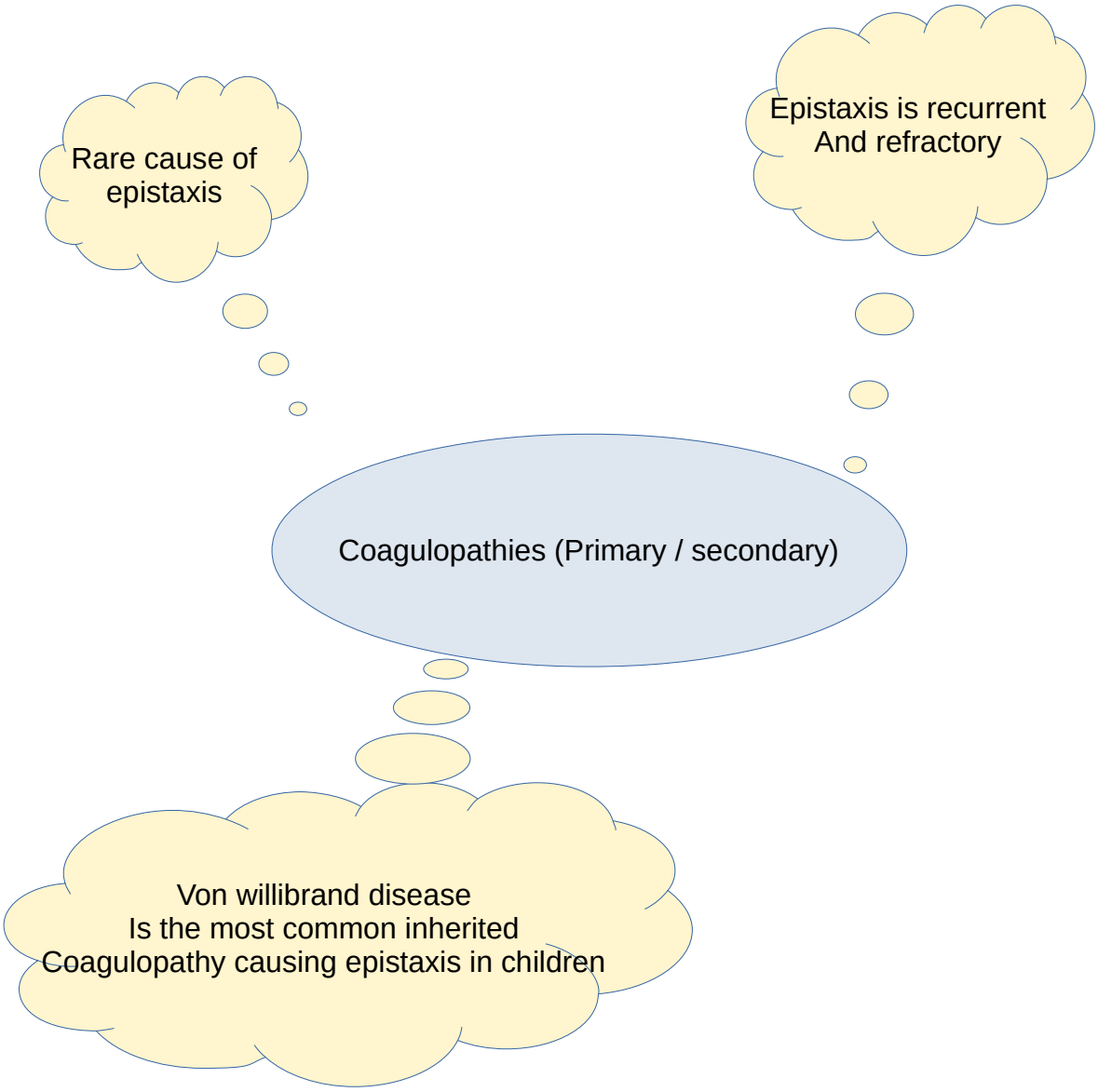
Rare cause of torrential epistaxis
Local invasion can accentuate problems

Even though it is a benign tumor it can cause
Life threatening epistaxis

Nasopharyngeal carcinoma:

This is a malignant tumor involving
Nasopharynx secondarily involving
The nasal cavity. It can cause foul
Smelling nasal discharge and
Epistaxis. It can invade skull base
And can cause multiple cranial
Nerve palsies

Coagulopathies



History

Majority of epistaxis are bilateral, but one side may be worse than the other.

Unilateral epistaxis with foul smelling discharge indicate the presence of foreign body.

Clinical Examination

Nasal examination:

Focus on the little's area but lifting up the tip of the nose. Nasal speculum is not used initially till the child is calm and confident. Presence of crusts should be noted.

Pale and bluish mucosa indicate allergic rhinitis.

Presence of allergic shines to be noted. Presence of Dennie Morgan lines indicate a diagnosis of allergic rhinitis.

Presence of foreign body inside the nasal cavity to be noted.

Distortion of the shape of the nose and presence of cervical enlarged nodes indicate the presence of malignant lesion.

Blood investigations:

Complete hemogram, BT, CT, platelet count, Blood grouping & Rh typing

Imaging:

CT nose and sinuses axial and coronal cuts

Management

Digital pressure for 10-15 minutes Hippocrates method

Nasal packing: Anterior nasal and Postnasal. Nasal packing stops Bleeding in 99% Of cases

Failure of digital Pressure to stop Bleeding is an Indication of shifting The child to the hospital

Blood transfusion

Cauterization of the bleeding spots under direct vision.