

HEMATEMESIS IN INFANCY AND CHILDHOOD

ESSAY

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Master Degree in Pediatrics

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



*To my mother and
my father's spirit.*

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**INTRODUCTION
AND
AIM OF THE ESSAY**

INTRODUCTION

Hematemesis is the term applied to the vomiting of gross blood. It may be bright red or darkened as a result of its conversion to hematin in the stomach in the presence of Hcl.

Hematemesis is a serious presentation among children in this country. It is one of the most difficult diagnostic and management problems encountered in practice.

The pediatricians must consider not only the numerous causes of hematemesis but also the probability of each cause presenting in different age groups.

According to Berman and Holtzapple (1978), the common causes of hematemesis differ with different age groups. For example, in new born several conditions are responsible for hematemesis such as hemorrhagic diseases of the newborn or swallowed maternal blood. While infants less than one year, other etiological factors are met with e.g. acute peptic ulceration or coagulation disorders. Children more than one year, esophageal varices and peptic ulcer are other major causes of hematemesis.

AIM OF THE ESSAY

The aim of this essay is to throw light on causes of hematemesis in infancy and childhood and define various methods for diagnosis, investigations and possible management.

REVIEW OF LITERATURE

ETIOLOGY OF HEMATEMESIS

Hematemesis is the term applied to the vomiting of gross blood. It may be bright red or darkened as a result of its conversion to hematin in the stomach in the presence of HCl.

According to Spencer (1964) bleeding from the gastrointestinal tract is a relatively common occurrence in children.

Fortunately, in most cases a very casual history and physical examination will reveal the lesion responsible, but occasionally, the most exhaustive investigation will fail to identify the hemorrhage source.

Forfar and Arneil (1984) reported the most common causes of hematemesis in infancy and childhood. These causes are:

1. Swallowed blood e.g. during birth, bleeding from cracked nipple in case of breast-fed baby, epistaxis, trauma to mouth and nose, dental extraction, tonsillectomy.
2. Hemorrhagic disease of the newborn.
3. Esophagitis (corrosive, reflux and infective e.g. moniliasis).
4. Esophageal varices - portal hypertension.
5. Gastric and duodenal ulceration.
6. Acute gastric erosions e.g. corticosteroid therapy.
7. Duodenal stenosis and atresia.
8. Blood dyscrasia. Thrombocytopenic purpura. Hemophilia (often swallowed blood from minor trauma to tongue and mouth), Von Willebrand's disease leukemia.
9. Acute poisoning.

8. Miscellaneous:

- * Chronic nephritis: uremia.
- * Anti-coagulant therapy.
- * Abdominal injury.
- * Cardiac disease.
- * Following abdominal operation, trauma and burn (Curling's ulcer).
- * Prolonged jaundice. * Polyarteritis nodosa.
- * Malignant hypertension. * Multiple neurofibromatosis.
- * X-ray telangiectasia of the skin and bowel.

Shearman and Finlayson (1982) reported that relatively few lesions account for most cases of hematemesis. These lesions are:

1. Gastric ulcer. } 40-50% of cases.
2. Duodenal ulcer. }
3. Acute gastric erosion 15-30% of cases.
4. Bleeding varices 5-10%.
5. Mallory-Weiss syndrome 5-14%.
6. Carcinoma of stomach 2%.

They also mentioned that in about 95 per cent of patients presenting with hematemesis, the site of bleeding is in the esophagus, stomach or duodenum.

Grand and Point (1974) reported that the pediatricians must consider not only the numerous causes of hematemesis but also the probability of each cause presenting in different age groups.

Age Related Etiology of Hematemesis

According to Berman and Holtzapple (1978):

A- In new born:

The causes of hematemesis are:

- 1- Swallowed maternal blood.
- 2- Hemorrhagic disorders of the new born.
- 3- Vomiting of blood stained-mucous after birth.
- 4- Unexplained.

In the majority of instances, hematemesis in the new born does not signify the presence of severe congenital or intrinsic gastro-intestinal disease.

In a study done by Sherman and Clatworthy (1967) on 94 infants in the neonatal period admitted to the hospital with the primary symptom of gastrointestinal bleeding, 54 had no obvious source of bleeding even though appropriate clinical and gastrointestinal examination were conducted. 19 infants in the same study had definite evidence of generalised bleeding diathesis while in 12 patients, hematemesis resulted from previously swallowed maternal blood. In 5 patients, a gastrointestinal infectious etiology was discovered and in 4 others, congenital heart disease was thought to result in impaired mesenteric perfusion with resultant ischemia.

If hematemesis occurs in an otherwise healthy new born, swallowed maternal blood is the most common cause. The detection of maternal blood can easily be determined by the Apt test which detects reduced fetal hemoglobin.

Berman (1983) mentioned that gastrointestinal hemorrhage in the neonate presents a difficult diagnostic dilemma. Prior to the advent of the pediatric endoscope, the causes of gastrointestinal bleeding in this age group often were undetermined. The most common causes of hematemesis in this age group are:

1. Swallowed maternal blood.
2. Gastric ulcer.