

Thesis  
For the Degree of M.D.

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+ Prepared by  
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Subject - Haematemesis  
including its various causes  
symptoms, diagnosis, and  
treatment

Having during the last three years had under my care, a number of cases of haematemesis, it occurred to my mind, what a variety of causes might be at work to produce an escape of blood into the stomach, and the difficulty which one has occasionally in making an absolutely certain diagnosis as regards the cause of the haemorrhage - hence the few remarks which I am about to make on the subject, which I intend presenting as a



79, MULGRAVE STREET,

LIVERPOOL.

April 24<sup>th</sup> 1894

I the undersigned hereby  
declare that the enclosed  
Thesis is entirely com-  
posed by myself.

O. F. Evans

79, MULGRAVE STREET,

LIVERPOOL.

24<sup>th</sup> April 1894

Prof. Fraser.

Dear Sir, I beg to enclose  
my Thesis for M. D.,  
also my certificate for  
my third optional subject  
viz. French; and the  
signed declaration.

I remain

Yours faithfully  
O. F. Evans

Thesis for M. D.

When called to see a patient in whom the chief symptom is, blood coming through the mouth and may be also through the nostrils, the first question one naturally asks himself is, where does this blood proceed from? Of course first of all one directs his attention to the patient, and enquire how the attack commenced, whether there was any feeling of nausea, giddiness, faintness disturbance of vision pallor of the face, and if the blood was expelled by vomiting, or on the other hand if the bleeding came on suddenly and by coughing, if we find the former symptoms present, then it points to haematemesis. We should examine the mouth fauces and nostrils also. Next we direct our attention to the blood itself and the following characters will distinguish haematemesis

# from haemoptosis

## Haematemesis

1. Black or brown colour
2. Blood as a rule is clotted either in large clots or in small ones resembling coffee grounds and frequently mixed with food.
3. Acid reaction and subsequent dark stools

## Haemoptosis

1. Bright red colour
2. Blood is frothy from admixture with air.
3. Alkaline reaction and subsequent expectoration of blood and mucous.

Now after having come to the conclusion that the blood has come from the stomach, the next question to decide is, what has caused the escape of blood into that viscus. The following conditions might give rise to haematemesis -

Certain conditions of the blood such as scurvy, yellow fever, purpura, malignant small pox, acute yellow atrophy

of the liver. External injury.

Acute congestion. Passive congestion from cirrhosis of the liver, heart disease, diseased kidneys or lungs and pressure on the portal vein. Passive congestion from these causes retards the return of blood from the stomach the flow becomes less and less brisk, the small veins in the mucous lining of the stomach become more and more congested and their walls get thinner and thinner until at last under the severe pressure they give way and haemorrhage results.

Atheroma of blood vessels is another cause, also Ulcer of the stomach is a very frequent cause of haemorrhage, and perhaps this is the most frequent cause of haematemesis. I do not intend to enter into the subject of gastric ulcer only as it concerns haematemesis. Various reasons have from time to time been given for causing a gastric ulcer.

Rokitansky suggested that

This affection arose from haemorrhagic erosions.

Verchow adopted this view and developed it. He says the gastric juice acts on the coats of the stomach, but this cannot take place as long as the circulation is maintained, because the blood being alkaline, will neutralise the acid of the gastric juice, therefore the circulation of a certain part of the stomach must be interfered with, such as obliteration of an artery or obstruction of a vein.

Panum injected little globules of wax into the branches of the abdominal aorta in dogs, where they found their way into the arteries of the stomach, the mucous membrane presented ulcers pretty closely resembling a gastric ulcer in its earlier stages.

Damage to any part of the stomach wall as by the forcible use of the stomach-pump, may cause that part

to loose its vitality sufficiently for the gastric juice to act on it.

Sometimes we meet with tubercular Ulcerations

Tight lacing might be the cause of an Ulcer.

Anaemia undoubtedly ~~tends~~ tends to produce this condition, it is difficult to explain how, but it is a remarkable fact that in a number of these cases the patients are very anaemic, of course anaemia is often the result of the haematemesis and malnutrition owing to the ~~the~~ condition of the stomach, ulcerations &c but on the other hand anaemia often precedes the haematemesis and the Ulcers. This might be due to dilatation of the right side of the heart as often is the case in anaemia then backward pressure is the result causing rupture of the small blood vessels in the lining of the stomach —

Any condition of the stomach which will cause the formation of butyric acid &c such

as dilatation, may cause coagulation in the blood vessels by the absorption of these acids afterwards this portion of the stomach wall having lost its vitality - is acted on by the gastric juice - Irritant poisons also may cause haematemesis, worry degenerations, and according to some we might have a venous haemorrhage -

Lastly Cancer of the stomach is a frequent cause of haematemesis - In cancerous tumours we have a very rapid formation of blood vessels taking place and here one of the most common symptoms is haemorrhage either in the interior of the tumour or on the surface of it. Slight violence or congestion is sufficient to rupture the extremely thin walled and brittle vessels of cancer of the stomach.

After having studied the various causes of haematemesis, our next consideration must be the different treatment

necessary for the different causes

In the treatment of course our first aim is to stop the haemorrhage but in order to attain this we must first decide to the best of our ability the cause - We shall divide the treatment into treatment of the attack and the after treatment

Treatment of the attack -

In all cases alike one of the most important points in treatment is rest, bodily, mentally, and locally to the stomach. The patient should lay in the horizontal position in a cool well ventilated room and should the haemorrhage be very profuse on no account should the patient be allowed to change his room, wherever the patient should happen to be when attacked, if possible a temporary bed should be made for him. The anxiety of the patient

should be calmed as much as possible. No food whatever should be allowed to enter the stomach, only an occasional piece of ice allowed to be sucked.

Ice may be placed externally over the stomach or Sinapism may be applied. Stimulants should be entirely avoided unless symptoms of collapse supervene. We should do all we can to lower the blood pressure, the haemorrhage itself has an influence in this direction nothing should be done to excite the action of the heart, the feet and legs and the skin generally should be kept warm, placing the feet in a hot foot bath, with mustard may do good by lowering the blood pressure.

As regards treatment by drugs ~~the~~ we should not begin this by pouring into the stomach the so called styptic medicines as in the majority of cases they will

not be required.

Morphia in most cases acts like a charm and should be given in 10 or 20 m. of the Liq. Morph. Hydroch. in a tea spoonful of cold water every four hours. The usefulness of this drug in haemorrhage was very clearly demonstrated to me in a patient who once took a fairly large dose of Morphia of her own accord. I had ordered her a mixture of the Liq. Morph. Hydr. in water. The patient was very restless and got out of her bed with the result that haemorrhage again appeared, afterwards in a fit of temper she took the whole that was remaining of the Morphia mixture which would probably contain about 30 or 40 m. of the Liq. Morph. Hydr. with the result that she slept for about fifteen hours, waking up next morning, calm, refreshed and in every way favourable and from that time made

an uninterrupted recovery. I believe the Morphia acts beneficially in several ways it calms the excitement especially of a nervous patient, calms the circulation, arrests the peristaltic movements of the stomach &c.

If after these measures have been adopted the haemorrhage still continues ergotin may be injected hypodermically 5 or 10 m. of the B.P. hypodermic injection may be injected every two or three hours.

If this fails and the haemorrhage getting alarming we may try the styptic remedies but these should be used immediately after vomiting has occurred, as Dr. Burney Yeo has pointed out that they are of little use when the stomach is partly filled with blood and half digested food, they must come in contact with the bleeding mucous surface to be of any service



Tannic acid in 10 gr. doses may be given in cachets or put on the tongue and washed down by a little cold water every two or three hours.

Styazeline in teaspoonful doses is useful. Alum, sulphuric acid, and acetate of lead are sometimes useful and lastly the perchloride of iron, the *Liq. ferri perchlor.* Dil. in cold water answers the best purpose.

If Syncope threatens the head should be placed low ammonia applied to the nostrils, cold water, sprinkled on the face, and if the syncope is alarming a hypodermic injection of 20 m. of Ether may be given.

Starvation is of the utmost importance, nothing whatever in the form of food being allowed by the mouth, the patient must be fed entirely by the bowel, peptonised milk and nutrient suppositories should be used, the nutrient suppositories manufactured by

Messrs Burroughs Wellcome & Co are very useful.

Having looked thus in a general way on the treatment of haematemesis, we may now look at some special features depending on special causes of haematemesis.

If the haematemesis is connected with any blood condition such as purpura &c this must be attended to Turpentine and Iron here acts beneficially.

Externally ~~if~~ injury if present should be attended to by the surgeon

Acute congestion should be treated by counter irritation, Bismuth, Soda &c given internally and if the haemorrhage is only slight milk or peptonised food might be given by the mouth.

Passive congestions again require appropriate treatment. Cirrhosis of the liver sometimes gives a good deal of trouble, here the great point is to relieve

The portal system, and this may be done by applying leeches to the anus, large doses of Sulphate of Magnesia, or 5 grs of Calomel may be given, the calomel maybe placed on the tongue and washed down with a little seed water. Hamamelis and Chloride of Ammonium are also useful in this condition —

In passive congestion resulting from heart disease, purging and diuretics do good and the condition of the heart must be treated with Digitalis and other heart tonics.

Congestion due to Renal and Lung diseases must be treated by appropriate remedies to these conditions.

When the haematemesis is due to Ulcer of the stomach this condition requires very careful treatment. After the haemorrhage has been controlled by the above measures the patient must be placed in the most favourable position to promote the healing of

(15)

The Uleer, and prevent further haemorrhage. Rest to the stomach is absolutely necessary, the patient must be fed for some days by the bowel until the bleeding point is fairly secured, then peptonised milk can be given by the mouth and Bengt's peptonised meat jelly or Chicken jelly are very useful, afterwards milk and lime water can be given and no other food until all pain and vomiting have entirely disappeared and that for sometime, this diet must generally be adhered to for about a month or six weeks or more if necessary. Vomiting must be controlled by Bismuth, hydrocyanic acid and Morphia, Cocaine also is useful to relieve pain and vomiting. Anaemia which also has been given as a cause must be treated by Iron Arsenic &c

When cancer of the stomach

is the cause of haematemesis we must try and prevent haemorrhage by keeping the bowels regular, as we have seen that any congestion might cause haemorrhage in cancers, the diet of the patient must also be carefully attended to.

A short history of a few cases may here be given as bearing on the above lines of treatment.

M. E. E. Age 22. A housemaid who had lived nearly all her life in the country, until about six months before her illness, when she came to town. Previous to her illness which I am about to describe, she had for years suffered from what was supposed to be indigestion, and treated accordingly, she used to have severe pains at times, after food, troubled with flatulence &c the usual symptoms of indigestion, vomiting then being absent. After coming to town she became very anaemic and suddenly one evening she had a severe pain over the

region of the stomach, and vomited about two pints of almost pure blood. When I saw her she had gone to bed and felt very faint and sick, and looked extremely pale. She was ordered to keep perfectly quiet, nothing being given her by the mouth except a little ice to suck, and a mixture of liq. Morph. Hydr. was ordered containing 5 m. in a teaspoonful of water. She was fed entirely per rectum for four days with peptonised milk and peptonised meat jelly (Benger's) then a little peptonised milk was given by the mouth as well as peptonised jelly in a little water, in a week she took milk and lime water, afterwards a little beef tea was allowed, she was kept on this diet for about three weeks, then a mixture containing the Ferri et Ammon. Cit. was prescribed on account of the Anaemia, and gradually a little more solid diet was allowed. She made a splendid recovery and ever since has

enjoyed perfect health, feeling better than she had done for years, enjoys her food and never troubled with pain or any discomfort. In this case there is very little doubt of the presence of ulcers in the stomach having existed for years, but probably not very extensive, when the patient came to town and the anaemia developed, the lining of the stomach being badly nourished by the blood, more ulcers developed or probably the old ones extended more and more until the haemorrhage appeared. The perfect rest which was given to the stomach and the condition of the blood being improved by the Iron causing the ulcers to heal up, will account for the good health she has enjoyed since.

Mrs McD. Age 26. This patient was suddenly seized with haematemesis one evening, previous to this she had enjoyed fairly good health, she was extremely excitable, and restless. She was subjected to the same treatment

19

as the above patient - only the morphia was given in larger doses. For two days she was doing well, but then contrary to orders she got out of bed and the haemorrhage returned, then the morphia mixture was continued in still larger doses especially at bedtime in a week she said she felt perfectly well and would no longer remain in bed or abstain from solid food she however made a perfect recovery, probably here the Ulcer was very small and healed up in that time. This patient was also ordered a mixture of Bismuth, Soda & Chloroform water, which I believe is very useful when there are signs of any acidity being present in the stomach.

J. E. Age 67. This patient had been a pretty heavy drinker for many years, he however had enjoyed good health until within the last four years when he suffered from Rheumatic fever.

When I was called to see

him he complained of vomiting of black material mixed with the partly digested food. The vomiting came on at intervals of once or twice a day. He had no pain whatever. He was put on milk diet and a mixture of Bismuth Soda & Morphine was ordered him, he improved for a time but gradually got worse again, then purging was tried large doses of Magnesium Sulphate were given, after this he improved slightly then calomel was given in 5 gr. doses and for a time he improved but afterwards the haemorrhage came back as bad as ever. Here the diagnosis was between cirrhosis of the liver and cancer of the stomach. Prof Carter of Liverpool saw the patient with me and he agreed that the diagnosis lay between these two. The absence of pain being in favour of cirrhosis. We tried ergot and nearly all the astringents also again purging, but nothing proved of any value eventually the haemorrhage got

worse and worse and the vomiting got intractable nothing whatever remaining on his stomach not even a drop of cold water. The patient died in about three weeks from the commencement of the attack.

M<sup>rs</sup> W. Had one morning a sudden attack of vomiting of blood. Previous history clearly pointing to gastric Ulcer. She was treated on the same plan as the first case mentioned, with Morphine, rest & rectal feeding also Bismuth was given with Soda for the acidity.

These cases will I believe suffice, out of a great number of similar cases to demonstrate that the main point in the treatment of haematemesis is rest, until the bleeding point is secured and if any erosions present for them to heal up, also the value of Morphine is clearly shown in these cases, and the undesirability of pouring into the stomach the styptics without first trying the above method.