

Besides all these I had the privilege of joining a students' class where we were shown the different difficult positions and presentations, and taught the use of forceps.

The trouble was to find time to digest all the wonders one saw, among which I should mention the laboratory specimens which were always open to us.

The main part of the Hospital, including a very fine chapel, was built in the 18th century. The wards in this building are rather old-fashioned, and the bath-rooms are recent additions, but there is a most comfortable Nurses' Home, and a surgical block lately built, with labour ward and operating theatre containing the latest inventions in table, shadowless lamp, sterilizing plant, and many labour saving devices which were unknown in the far-off days when I was trained.

Of the friendliness of everyone from the highest to the lowest, I cannot speak in sufficiently grateful terms, and I end by saying that if any nurse wants thorough instruction in midwifery and women's diseases, combined with interesting surroundings, and much of the lighter side of life, let her go to the Rotunda Hospital, and I feel sure she will never regret it.

ANAEMIAS OF PREGNANCY *

BY DR. A. LAKSHMANASWAMI

ANAEMIA means a reduction in the Red Blood corpuscles or the Haemoglobin of the Blood. Anaemia may be present in a woman and she may become pregnant and such anaemias we call anaemias with pregnancy. Anaemia that develops only when the woman is pregnant or because of pregnancy, is called Pregnancy Anaemia. This particular type of Anaemia may take on pernicious nature which may jeopardise the life of the patient to a considerable extent. Thus Anaemias are divided into two broad groups:—

1. Anaemia with Pregnancy.
2. Pregnancy Anaemia.

Apart from this sort of grouping etiologically, we divide Anaemias into Primary and Secondary. Primary Anaemias are those in which no recognizable cause has been found and the second group of Pregnancy Anaemia belong to this class. In Secondary Anaemias or symptomatic Anaemia, a recognisable cause is present. Mostly group I. belongs to this class.

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Pernicious Anaemia of Pregnancy.—This is one of the most serious conditions complicating pregnancy—developed because of pregnancy. The etiology of this condition is little understood. The theories of its causation are as follows:—

(1) Some say it is due to a Toxaemia (toxin absorbed from the intestine of the mother or toxins of the placenta or the foetus absorbed by the mother).

(2) Others think that it is a deficiency disease, due to lack of some vitamins.

(3) Still others think it is Pernicious Anaemia or Addisonian Anaemia that commonly occurs in non-pregnant women as well as men, which is manifested first during pregnancy.

In all these, three important features are noted:—

(1) There is no diminution of the Hydrochloric acid of the gastric juice.

(2) The Anaemia improves soon after the termination of pregnancy.

(3) The Anaemia grows worse as pregnancy advances, but will respond to treatment, if started early.

There are two types of Anaemia of unknown etiology which are called Pregnancy Anaemia:

(1) In some there is a low colour index and the blood picture is that of Secondary Anaemia. These cases have good prognosis.

(2) The majority of cases belong to this group and they justify their nature of Pernicious Anaemia. The Anaemia is severe and often fatal. The colour index is high.

Now, we come to the *causes of Secondary Anaemias* or mostly the Anaemias that occur with or without Pregnancy.

(a) *Haemorrhage.*—Ante-partum haemorrhage is a very important group. Other conditions which produce Anaemia in a woman are piles (bleeding piles), Haemoptysis.

(b) Certain *infections* such as:—

(i) Malaria.

(ii) Kala-Azar.

(iii) Typhoid fever.

(iv) Syphilis.

(v) Tuberculosis.

(vi) To some degree most specific fevers

(vii) Nephritis & Pyelitis.

(viii) Chronic dysentery.

Here in the Tropics we have to take particular note of Anaemias that are due to Malaria, Kala-Azar and Tuberculosis.

(c) *Helminthic infections or animal parasites.*

- (i) Ankylostome infection or Hookworm disease. This is the most common type of Anaemia that occurs in the Tropics and particularly in the poorer classes who expose themselves to the infection more than the well-to-do. The prevention of this disease is of great public health importance in saving the lives of millions and particularly so of pregnant women, all of whose extra resources are taxed by the effect of pregnancy.

- (ii) Tapeworms.

- (iii) Round worms.

(d) Intoxications and drugs such as lead poisoning.

(e) Blood Disease—Splenic Anaemia and Hodgkin's Disease.

(f) Chronic idiopathic secondary anaemia. This group also is fairly common. In this no ascertainable causes can be found but all the signs are those of Secondary Anaemia. In this group the causes are generally:—

- (i) Deficiency of vitamins in the food.
- (ii) Malnutrition.
- (iii) Want of iron in the body.
- (iv) Want of fresh air.

Incidence.—Anaemia is fairly common in every pregnant woman. The severe anaemias are pretty frequent in South India and many cases are due to Ankylostomiasis and other Helminthic infections, and others to Malaria. There were 41 cases of Anaemia complicating pregnancy in the year 1929 in the Women and Children Hospital, Madras. The usual causes of Anaemia were Ankylostomiasis and other Helminthic infections, Malaria, Pernicious type of Anaemia.

Symptoms.—Physical and mental weakness and rapid fatigue. The entire system suffers and the heart shows the earliest effects.

- (i) Circulatory system—Shortness of breath, palpitation, faintness, giddiness and swelling of the feet.

- (ii) Gastro-intestinal system—Constipation, Dyspepsia, loss of appetite. In some of these cases the acid secretion is diminished. Vomiting and Diarrhoea in some cases. A sprue-like diarrhoea occurring in pregnant women particularly in puerperium.

- (iii) Nervous system—Headache, faintness, giddiness, musca-volitantes (floating specks in the vision), irritating tingling and numbness.

Physical signs :—

- (i) Pallor, especially of mucous membranes and sallowness are first noticed.
- (ii) Pulse—soft and small and rapid and rapidly accelerated.
- (iii) Heart—Haemic murmurs common—best heard in the pulmonary area and less commonly at the apex.
- (iv) Venous pulsation and murmurs at the neck.
- (v) Oedema of the feet.

Blood changes.—The blood changes are different in the Primary and the Secondary Anaemias.

In the Primary :—

- (i) R. B. C. diminished 1 to 3 millions.
- (ii) Haemoglobin reduced, but relatively it is much more present than in secondary Anaemia.
- (iii) Colour index (which is the ratio of the percentage of Haemoglobin to the percentage of the R. B. C. is high, above 1.
- (iv) Abnormalities in the size of R. B. C. and nucleated R. B. C.

In the Secondary :—

- (i) R. B. C. diminished 2–4 millions.
- (ii) Haemoglobin reduced much.
- (iii) Colour index is very much low. Normal is 0.8. In this it will be 0.2 to 0.6. In Primary Anaemia it will be near 1 or above 1.

Effect on Pregnancy.—It necessarily stands to reason the infant will not have the proper nourishment though in most cases, the infant looks healthy when born. The woman is more liable to infection and thus her condition is always sickly. Apart from this, there is a greater tendency for these patients to go into labour too soon. The complications that may occur are :—

- (1) Premature labour—miscarriage or abortion, in the order of pregnancy.
- (2) Still birth, or sometimes intra-uterine death of the foetus.
- (3) The patient may bleed to death due to profuse post-partum haemorrhage.

Apart from these, the infant mortality (that is, death of the infants in the first year of their life) is greater in children born of anaemic mothers and particularly so of the pernicious type of anaemia.

Treatment.—We have to discuss this in various heads depending on the cause. The treatment of Pernicious Anaemia may be outlined thus :—

Diet.—Treatment with liver was first introduced by Minot and Murphy in 1926—half a pound of liver daily may be given as

- (1) Raw liver pulp
- (2) Liver juice with orange juice
- (3) In sandwiches
- (4) Scraped raw liver in soup
- (5) Fried.

Other constituents of food—plenty of milk, eggs, and good fruits.

Marmite.—One ounce thrice daily in 4 ozs. of warm water, after food.

Rest in bed.—Perfect rest must be enjoyed.

Drugs.—Pepsin and Hydrochloric Acid by mouth. Hydrochloric acid to be diluted—1 drachm in 2 ozs. of water, after food.

Liver extracts by mouth or by intravenous or intramuscular injections according as the conditions of the patient may demand.

Ventriculin.—Dessicates stomach extract.

Transfusion of whole blood is supposed to be excellent in some severe cases of Pernicious Anaemia of Pregnancy.

Treatment of Secondary Anaemia.—Treat the cause.

Important Diseases :—

Ankylostomiasis.—To be treated with Oleum Chinapodium, minims 15 to 20 in capsules in two doses, one at 6 and the other at 6-30 a.m., after a preliminary purgative, followed by Mist. Mag. sulph. 2 oz. at 7-30 a.m. Examine the motion weekly and give three or 4 courses of treatment for Hookworm. Treat the Anaemia with Iron and Arsenic and good diet and fresh air.

Round-worms.—Treat with Santonine, gr. 3 to 5.

Tape worms.—Treat with Ext. pelices. liquidum.

Malaria.—Treat with Quinine and Arsenic.

Kala-Azar.—Treat with urea stibamin or Neosalvarsan.

Apart from this, in all these cases :—

- (1) *Diet*—good, nutritious, lacto vegetarian diet, with enough vitamins.
- (2) *Fresh air.*
- (3) *Drugs.*—Iron in large doses : Arsenic injections. Hydrochloric acid dilution by mouth if there is diminished acid in the stomach. In some cases of Secondary Anaemia, liver is also useful and it improves the condition when given in massive doses. In many cases, liver and iron are of much more use than iron or liver alone.

(4) *Treatment of focal sepsis.*—Teeth, tonsil, etc., vaccine treatment.

Obstetric Treatment.—Examination and treatment for Anaemia should be included in the routine care of the pregnant woman. Ante-natal care of these patients will certainly lessen the morbidity as well as the mortality of both the mothers and the infants.

As severer anaemias occur in any time of pregnancy, the treatment must be based on rational methods. Artificial termination of pregnancy must not be sought for unnecessarily since fatal end may be precipitated by interference. But in some very severe cases of Pernicious Anaemia of Pregnancy, where the patient is gradually going down hill, termination of pregnancy would be better.

During labour, the patients may require some aid, forceps during the second stage.

Care must be taken for the prevention of post-partum haemorrhage. In severe cases whole blood transfusion only would save the life of the patient.

Puerperal sepsis is fairly common in anaemic cases and every precaution must be taken to prevent sepsis as well as to raise the resistance of the individual to a high degree.

The Nurses' Recompense

Is it for gold this uniform of service,
The spotless garb of dignity you wear;
Is it just beauty's sake and beauty alone
Has set the snowy cap upon your hair;
Is it for these you spend long hours of labor?
No, sweeter far your recompense will be—
"Ye who have served the least of these my brethren?"
The Master said, "Have ministered unto me."

It is perchance for fame you have come hither,
Seeking to comfort those in grief and pain?
Binding the wounds with healing touch and bringing
Health to the weary suffering ones again?
No, not for praise your days of loving service,
Higher your ideal far than ideal fame,
Yours is a blessing, for the least you render—
"A cup of water in my name."

So not for gold nor fame nor beauty,
This snowy garb of dignity you wear,
Down the dim aisles of pain wrecked souls of sorrow
Your coming breathes a comfort as of prayer;
For in your life of consecrated service,
It is the Master's image that you see
In every soul—To you the words were spoken—
"Lo, I was sick and ye visited me,"