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Expert Column

# Anemia in Pregnancy

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**Have you ever wondered why pregnant women are prone to anaemia?**

Anaemia is a common occurrence in pregnancy. According to the World Health Organization (WHO), 14.7%–59% of pregnant women in different regions were anaemic in 2019. In Malaysia, it was 31%. During pregnancy, there is a significant rise in plasma volume with a lower increment in red blood cell (RBC) mass. These changes, which result in an increase in total blood volume, are important to meet the increased demands of blood flow for the foetus and may protect pregnant women against blood loss during childbirth. However, the disproportion in volume expansion between the plasma and RBC mass results in haemodilution.

**Causes**

Iron deficiency anaemia (IDA) is a common culprit causing anaemia in pregnancy as iron stores are often inadequate to meet the increasing demands of pregnancy due to the increase in RBC mass, foetal growth, and blood loss during delivery.

Although iron deficiency is the commonest cause of anaemia in pregnancy, other aetiologies such as nutritional deficiencies of vitamin B12 and folate, hemoglobinopathies, and infections should be considered.

**Consequences**

IDA results in decreased oxygen transport to tissues, causing women to develop symptoms such as fatigue, decreased ability to concentrate, palpitations, reduced immunity which leads to an increased frequency of infections, and pica (the tendency to eat things that are not considered food).

Pregnant women have also been associated with an increased risk of premature delivery due to iron depletion. Moreover, IDA may affect foetal growth and development inside the womb.

**Detection**

In order to provide enough time for treatment in the event that anaemia is discovered, the National Institute for Health and Care Excellence (NICE) in the UK advises that screening for anaemia in pregnancy be made available at booking and at 28 weeks.

**Prevention**

Pregnancy-related iron deficiency anaemia (IDA) can be prevented by taking iron supplements, fortifying staple foods with iron and other vitamins and minerals, and providing health and nutrition information. The WHO recommends daily supplementary iron for all pregnant women in all circumstances; it should be initiated as soon as pregnancy is confirmed and continued for the full duration of the pregnancy.

As for folic acid, it is recommended to start prior to conception for the prevention of neural tube defects.

The World Health Organization strongly advises oral iron and folic acid supplements during pregnancy. However, there are currently no specific recommendations for vitamin B12 supplementation in pregnancy.

**Treatment: Iron therapy**

The primary treatment in cases of IDA is oral iron therapy; it should be taken on an empty stomach. Intravenous iron preparation can be beneficial in certain cases, such as in mothers who do not respond to oral iron, are not compliant, or are unable to tolerate oral iron preparations.

**Treatment: Red blood cell transfusion**

It is unclear whether blood transfusions are beneficial to pregnant women who are not actively bleeding. Furthermore, there are risks involved with blood transfusions. Therefore, blood transfusions should be reserved for those who have symptoms, pose a risk of further bleeding, or have a serious heart condition.

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