



GESTATIONAL DIABETES

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(Prelims Paper 1: General Science)

Context:

- Diabetes is a major public health problem in India with an estimated 7 crore adults with diabetes and half as many with prediabetes.
- Unfortunately, over half remain undiagnosed till late complications set in.
- The consequences of this for the health system, economic productivity and the individual's life and family are well documented and well known.

Diabetes and its types:

- Diabetes mellitus, commonly known as diabetes, is a metabolic disease that causes high blood sugar.
- The hormone insulin moves sugar from the blood into your cells to be stored or used for energy.
- With diabetes, body either doesn't make enough insulin or can't effectively use the insulin it does make.
- Untreated high blood sugar from diabetes can damage your nerves, eyes, kidneys, and other organs.

There are a few different types of diabetes:

- Type 1 diabetes is an autoimmune disease. The immune system attacks and destroys cells in the pancreas, where insulin is made. It's unclear what causes this attack. About 10 percent of people with diabetes have this type.
- Type 2 diabetes occurs when your body becomes resistant to insulin, and sugar builds up in your blood.
- sPrediabeto occurs when your blood sugar is higher than normal, but it's not high enough for a diagnosis of type 2 diabetes.
- Gestational diabetes is high blood sugar during pregnancy. Insulin-blocking hormones produced by the placenta cause this type of diabetes.
- There are two classes of gestational diabetes.

- Women with class A1 can manage it through diet and exercise.
- Those who have class A2 need to take insulin or other medications.
- Each type of diabetes has unique symptoms, causes, and treatments

Transitory form of diabetes:

- Pregnancy is a diabetogenic stress and as a consequence, some women develop a transitory form of diabetes during pregnancy called gestational diabetes.
- Women of Indian (South Asian) origin are considered to be at highest risk of gestational diabetes.
- The International Diabetes Federation (IDF) estimates that up to 25% of pregnancies in South Asia may be affected by hyperglycemia in pregnancy.
- In India it varies from about 10% in rural areas to about 30% in urban areas.
- There are approximately 2.7 crore to 3 crore pregnancies each year in India.
- Assuming a modest gestational diabetes rate of 10%, means that about 27 lakh to 30 lakh women develop it each year.

Complications increased during pregnancy:

- Gestational diabetes is associated with significantly increased risk of complications during pregnancy.
- These are preeclampsia (fits during pregnancy), prolonged and obstructed labour, need for assisted delivery, postpartum haemorrhage and sepsis, stillbirths, premature delivery.
- Increased risk of neonatal deaths due to respiratory distress, neonatal hypoglycaemia and birth injuries are other complications.
- All these conditions contribute to high maternal and new born morbidity and mortality.
- If a woman gets gestational diabetes, it is easier to identify her as being at risk of diabetes and cardiovascular diseases.
- Almost half the women with gestational diabetes go on to develop Type 2 diabetes within 10 years without preventive care.
- Children born to women with gestational diabetes are also at very high risk of obesity, Type 2 diabetes, and cardiovascular diseases.

Addressing gestational diabetes:

- Addressing gestational diabetes has an impact at three levels.
- It will help lower maternal and new born morbidity and mortality.
- Reduce the risk of future diabetes and cardiovascular diseases in women with gestational diabetes.
- Possibly break the chain of 'diabetes begetting diabetes' by addressing the issue of trans-generational transmission.

Test procedure:

- There is lack of public awareness about gestational diabetes as well as low awareness and capacity within the health systems for testing and providing care.
- This is despite the availability of national guidelines and diagnosis and management of gestational diabetes by the Ministry of Health and Family Welfare, Government of India.
- Diabetes in Pregnancy Study Group of India suggested a single test procedure which is economical and doable.
- The World Health Organization, the IDF and the International Federation of Gynaecology and Obstetrics have also approved this test procedure.

Way forward:

- Being conceived by healthy parents and born to a mother in good health is the best gift a child can receive as this provides a health advantage.
- But increase in the diabetic patients in the country is mainly due to genetic factors tied with rapid urbanization and lifestyle modification.
- Thus, it would be advised that a healthy lifestyle across the geographic regions with regard to any age groups with proper diet (rich in fibres) and an exercise (yoga or any other physical activities), lower the burden of disease and enhance the Indian social and economic conditions.