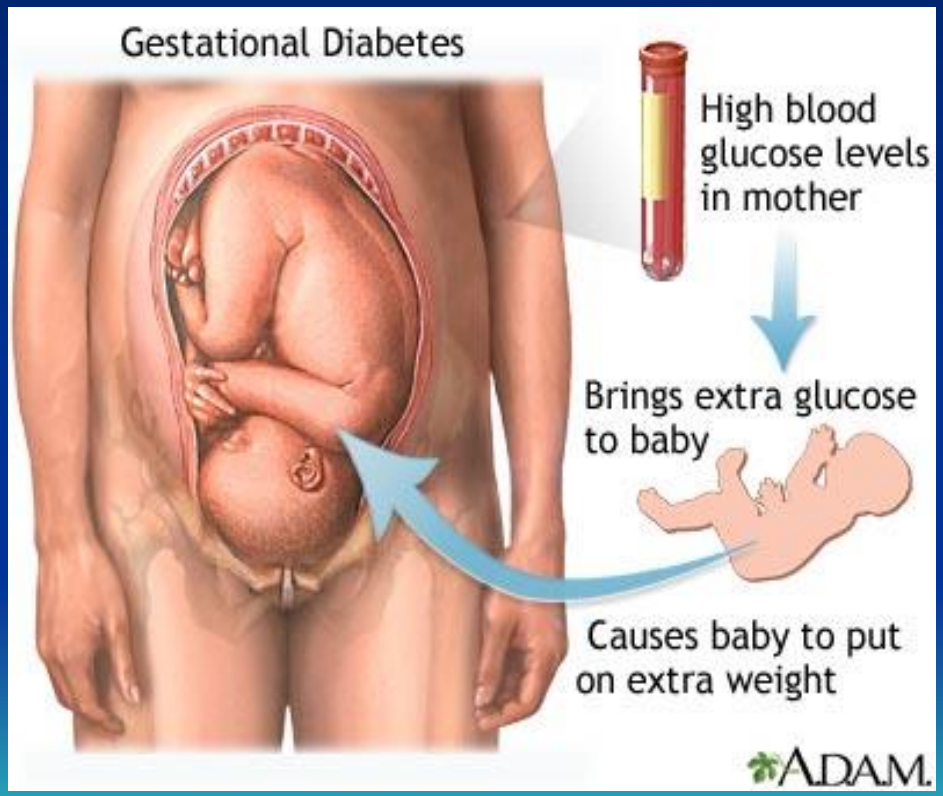
Gestational diabetes



metabolic disease result from underproduction of insulin which effect CHO , fat &protein metabolism

During pregnancy

1.preexisting

2.gestational

Homeostasis during pregnancy

NP - FBS maintained 4-5 mmol/l

-insulin level double to maintained in the 2-3rd trimisters

- preg is insulin resistant state

-causes of resistant

a. placental hormones

b. changes in periphrel insulin receptors

Glucose cross the placenta by facilitated diffusion

Gestational Diabetes

State of glucose intolerance which occurs at the end of second trimester or early third trimester met WHO criteria for diabetes and revert to normal after peurperium

Incidence :

1 : 1000 _ 1 : 2000

WHO criteria

	fasting	2hr postprandial
Diabetic	>=8mmol	>=11mmol \ L
Normal	<8mmol	<11mmol \ L

Screening for diabetes

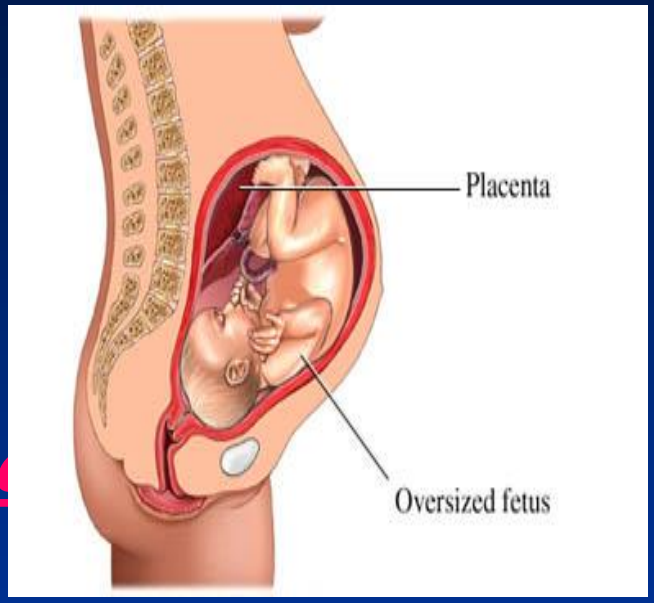
- No single test has been shown to be perfect

GTT high risk or potential diabetic

- h\o 1 st degree relative or 2 nd
-poor obstetrical history
-glycoseuria on two occasion first in the morning
-polyhydramnias
-macrosomic infant
-obese mother
-advance maternal age

GTT on low risk group cannot be justified

- Glucose challenge test
- HbA1C
- Glycosylated protein
- Glucoseuria
- Standard meal test



Effect of diabetes on pregnan

Feta & neonatal complication

- miscarriage
- 2nd trim. Fetal death
- congenital fetal abnormalities – 3 times
- PIH
- Fetal macrocosmic
- Unexplained still birth
- Polyhydramnia & preterm labour

Neonatal : hypoglycemia , polycythemia ,
hyperbilirubinemia
RDS
birth asphyxia & trauma
hypocalceamia&magnesemia

Maternal mortality &morbidity

_mm improved after insuline
-nephropathy
-retinopathy
-PE
-Infection :UTI , moniliasis ,chest infection
- Sever hypo & hyperglycemia
- -operative delivery : 50%

Effect of pregnancy on diabetes

- Difficulty in control

lower renal threshold

diminish sensitivity to insulin as pregnancy advance

- Nephropathy
- Retinopathy previous proliferative retinopathy was contraindication for pregnancy

Management

1. Required diabetic team
2. Strict metabolic control before and during pregnancy
3. Increase frequency of ANC visit

To achieve euglycemia

-Diet 1800 calories should be prescribe i.e30-35kcl \kg if ideal body weight + 300kcl to anticipate wt gain during pregnancy

-50-60 % CHO complex

-18-20% as protein

-25% as fat (important to have bed time snaks)

Insulin

- Oral hypoglycemic ……not recommended

-better to use combination

-Short acting +intermediate in two divided dose

-long acting rarely used

Special formula to calculate insulin requirment:

unit insulin = Bwt ×0.6 1st trimester

= 0.7 2nd

= 0.8 3rd

Dosage schedule

2/3 in the morning , 1/3 in the evening

A.M 2/3 intermediate + 1/3 short acting

P.M ½ intermediate + ½ short acting

Aim : is to keep blood sugar pre-prandial < 6mmol/l i.e less than 100mg/dl , FBS 60-90 mg

exercise should be encourage 1/2hr after meal

Antenatal obstetrical management

Surveillance should be maintained to avoid risk of maternal and fetal complication

1. Detailed USS at 16-20weeks then 28-32weeks (biophysical profile)
2. Fetal ECHO

-Serum alfa fetoprotein

-maternal : renal ,cardiac , ophthalmic ,function are monitor

- glycosylated (hba1c) monthly

Timing of delivery

-maternal state is stable

- Blood glucose level is euglycemic
- Fetal growth is satisfactory

Wait until term (38-40wks) not beyond, if condition not met so intervention

- Intrapartum

Need to keep the mother euglycemic in labour

- Continues infusion 5%- 10% dextrose + 0.5-2 unit of insulin
- Measure blood glucose every 2hrs ,adjust insulin accordingly aim is to keep level 80-100mg/dl
- Fetal scalp electrode
- Aim is vaginal delivery unless there is obstetrical complications
- c/s rate 50%

- Postpartum
- After delivery of placenta insulin requirment drops sharply
- 1st 48hrs most pt do not require insulin
- After depend on sliding scale
- Encourage breast feeding with addition of 70 calories
- Counsel about contraception

  barrier better

  combine pills risky

  progesterone only pills failure rate

  IUCD infection

  sterilization with advance vascular involvment