

Midwifery
25/08/21

Unit 1X

High risk pregnancy
if it's management

Osteomalacia: is the softening of the bones caused by defective bone mineralization secondary to inadequate levels of available phosphate & calcium, or because of overactive resorption of calcium from the bone & can be caused by hyperparathyroidism (c causes hypercalcaemia)

- Osteomalacia in children is known as rickets, & because of this use of the term osteomalacia is often restricted to milder, adult form of the disease.

Causes

- Osteomalacia is a generalized bone condition in c there is inadequate mineralization of the bone.
- There are two main causes of osteo.
 1. Insufficient calcium absorption from the intestine because of lack of dietary calcium or a deficiency of, or resistance to the action of vit D &
 2. phosphate deficiency caused by renal losses.

- Dietary deficiency of vit D + lack of solar irradiation
- Deficiency of metabolism of vit D.
 - Chronic renal disease
 - Chronic liver disease
 - Biliary: abnormal gut absorption.
- ↓sed deposition of calcium in bone
- Other causes
 - Tumour induced osteomalacia
 - Cadmium poisoning (when a person breathes a high levels of cad. from air ^{or} drinks water ^{containing} cad.)

Signs & Symptoms

- Diffuse joint & bone pain (especially of spine, pelvis & legs).
- Difficulty in walking.
- Muscle weakness
- Pelvic flattening
- Weak, soft bones.
- Easy fracturing
- Bowling of bones
- Osteo. in adults starts insidiously as aches & pains in the lumbar (lower back), region of thighs before spreading to the arm & ribs, there is difficulty in climbing up stairs

- As a result of demineralization, the bones become less rigid. physical signs include deformities like lordosis.

Lab findings 1's

- Biochemical features are similar to those of rickets. The major factor is an abnormally low vit D concentration in blood serum.
- Major typical biochemical findings include:
 - low serum & urinary calcium
 - low serum phosphate, except in cases of renal osteodystrophy
 - elevated serum alkaline phosphatase (due to increased in compensatory osteoblast activity)
 - Elevated parathyroid hormone (due to low calcium)
- Bone Scan

Radiology

- Diffuse demineralization: osteoporotic like pattern → may show a characteristic smudgy "blurred" or "fuzzy" type of demineralization.
- Coarsened trabeculae.

• Pseudofractures (Looser's zone)

Treatment

- Nutritional: Osteomalacia responds well to administration of 10,000 IU weekly of vit D for 4 to 6 weeks.
- Osteomalacia due to malabsorption may require treatment by injection or daily oral dosing of significant amount of vit D.
- Calcitriol supplement for CKD.
- Exercise: helps to strengthen the bones, especially weight-bearing exercise (anything that involves walking or running). However, you should avoid intensive exercise while any fractures or cracks in the bones are healing.
- Sunlight: where possible, going outside & exposing your arms & face to sunlight is the best way to get vit D. From June - Aug just 15 mins a day is generally enough. Don't allow your skin to go red & take care not to burn.
- Diet & nutrition: A diet that includes

vit D & calcium can help, but this won't prevent the condition by itself. nevertheless, a diet that provides vit D is especially imp. if you don't get enough exposure to sunlight.

Diabetes Mellitus in pregnancy

DM in pregnancy falls into 2 categories.

1. Gestational DM (GDM): Any degree of glucose intolerance & onset or first recognition during pregnancy. Does not exclude possibility that unrecognized glucose intolerance may have been present before onset of pregnancy.

2. Pre-gestational DM: Set when the woman has diabetes before pregnancy.

1. GDM: is a condition in which a hormone made by the placenta prevents the body from using insulin effectively. Glucose builds up in the blood instead of being absorbed by the cells.

Alc. > 5.0

Causes of GDM

Although the cause of GDM is not known, there are some theories as to why the condition occurs:

• The placenta supplies a growing fetus with nutrients & water, & also produces a variety of hormones to maintain the pregnancy. Some of these hormones (estrogen, cortisol & human placental lactogen) can have a blocking effect on insulin. This is called 'contrainsulins' effect & usually begins about 20 to 24 weeks into the pregnancy.

• As a placenta grows, more of these hormones are produced & the risk of insulin resistance becomes greater. Normally the pancreas is able to make additional insulin to overcome insulin resistance, but when the production of insulin is not enough to overcome the effect of the placental hormones, gestational diab. results.

Risk factors of GDM

Although any woman can develop GDM

during pregnancy, some of the factors that may increase the risk include the following:

- overweight or obesity
- family history of diabetes
- Having given birth previously to an infant weighing greater than 9 pounds.
- Age (women who are older than 25 are at a greater risk for developing GDM).
- Race (women who are African-American or Asian American have a higher risk).

D's

The American diabetes Association recommends screening for undiagnosed type 2 diabetes at the first prenatal visit, in women with diabetes risk factors.

- In pregnant women not known to have diabetes, GDM testing should be performed at 24 to 28 weeks of gestation.
 - In addition, women with prediabetes should be screened for persistent diabetes 6 to 12 weeks postpartum.
- It is also recommended that women with