PREGNANCY PROBLEMS IN PRIMARY CARE

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NORMAL PREGNANCY

- 680000 babies born in the UK
- Pregnancy associated with change of physiology
- Changes results in common symptoms of pregnancy for which patients may see health care professionals

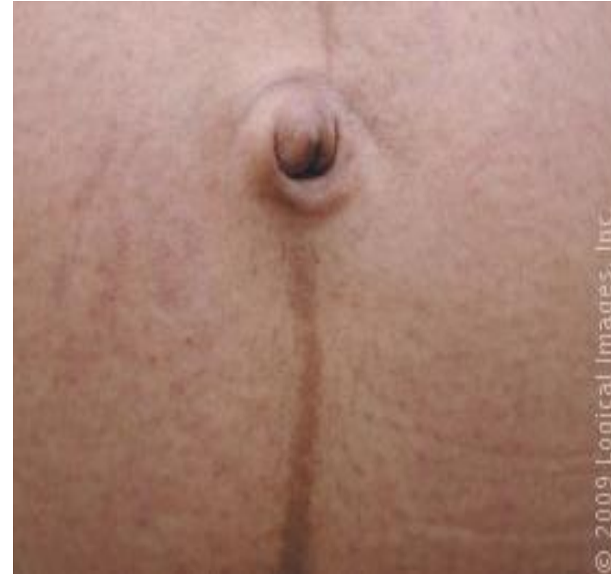
Considered a ‘stress test’ on womens’ health

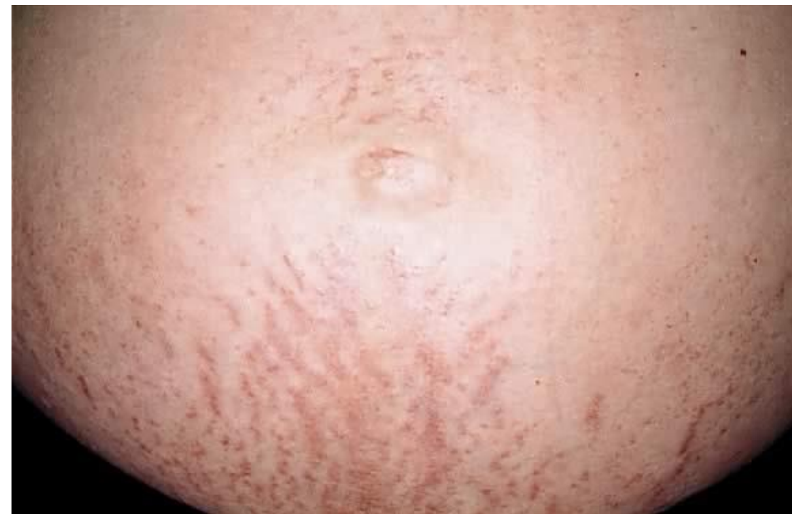
INTRODUCTION

- Organ specific
  - Skin
  - Mucous membranes
  - Cardiovascular
  - Respiratory
  - Renal
  - GI
  - Endocrine
- Specific conditions in pregnancy with cases

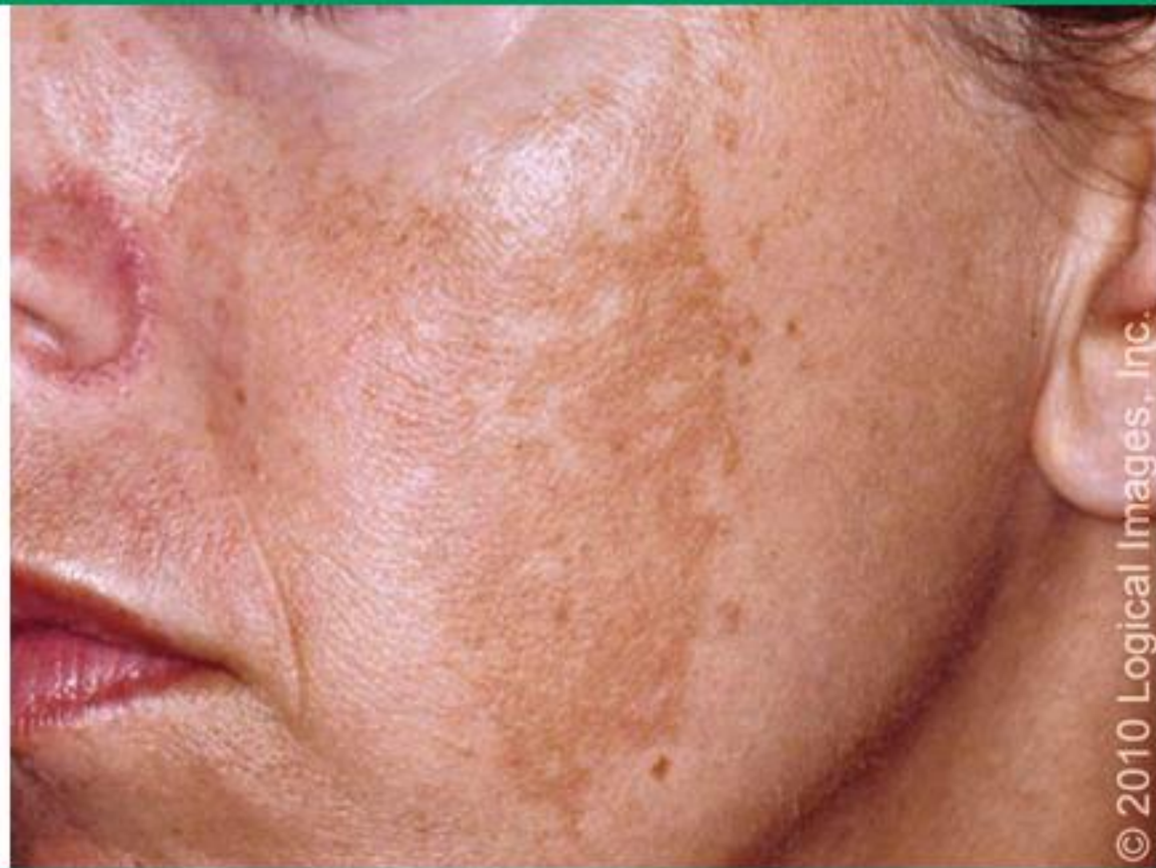
SKIN

- Pigmentation
  - Pathogenesis not completely understood
- Linea alba becomes nigra
- Areola darkens
- Axilla, genitalia, perineum, anus, inner thighs and neck
- Recent scars, freckles
- May take several months to recover postpartum
- Naevi can look suspicious during pregnancy
- Melasma occurs in 75% of women





Melasma



A mottled hyperpigmented patch is present on the cheek.
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SKIN

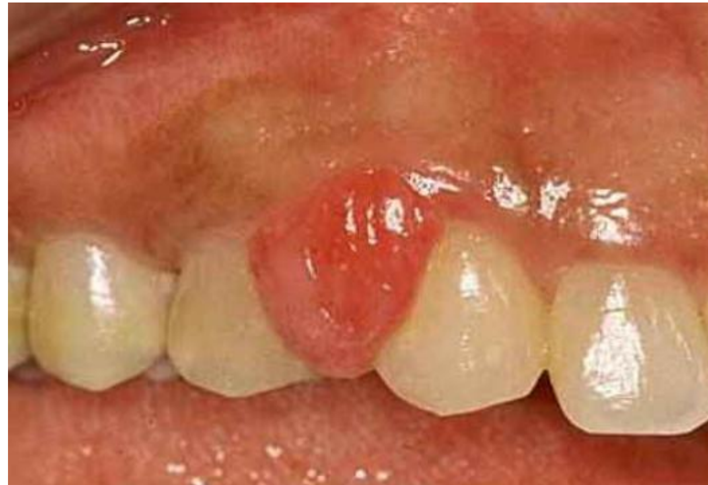
- Oestrogen causes vascular distension and proliferation of blood vessels
  - Spider angiomas and Naevi
  - Mostly resolve within 3 months
  - Palmar erythema
  - Varicosities
  - Venous distension of vestibule and Vagina and vulval varicosities
- Oedema and water retention of extremeties
- Purpura
- Striae gravidarum

HAIR

- Hirsuitism
  - Arms, legs back and suprapubic region
- Anagen and telogen hair
  - Scalp hair appears thicker during pregnancy but hair loss and thinning 1-5 months post partum
  - This may resolve by 15 months but never to the same state in some people
- Androgen alopecia involving frontal scalp may occur

MUCOUS MEMBRANES

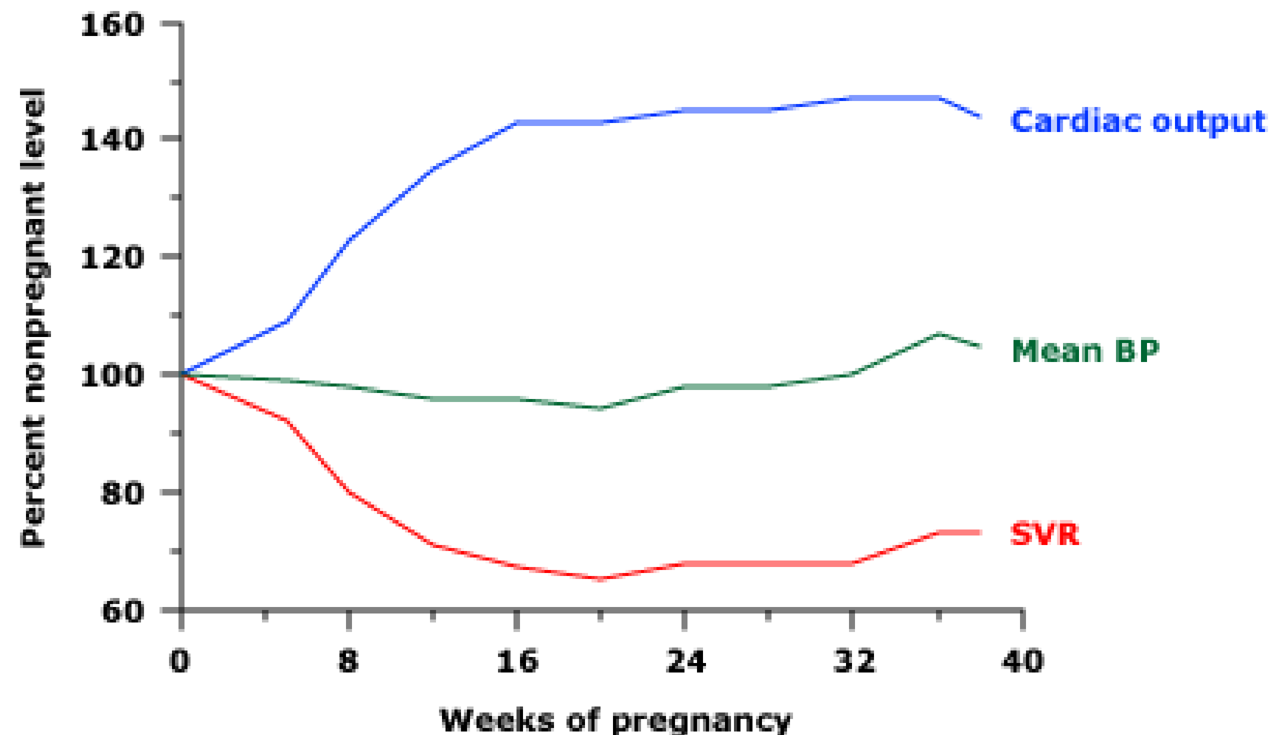
- Blue discolouration of vagina and cervix
- Gingival changes, and gingivitis, bleeding ulceration and pain
- Hyperaemia of nasal mucosa causing congestion



CARDIOVASCULAR SYSTEM

- ↑CO ↑ Plasma volume
- To encourage optimum growth of fetus
- Increase in red cell mass
- Haemodilution and anaemia
- Increase in maternal heart rate
- Fall in BP mainly in second trimester
- Coagulative changes encouraging a prothrombotic state
  - Raised Cholesterol (50%) and Triglycerides (300%)
- Palpitations very common

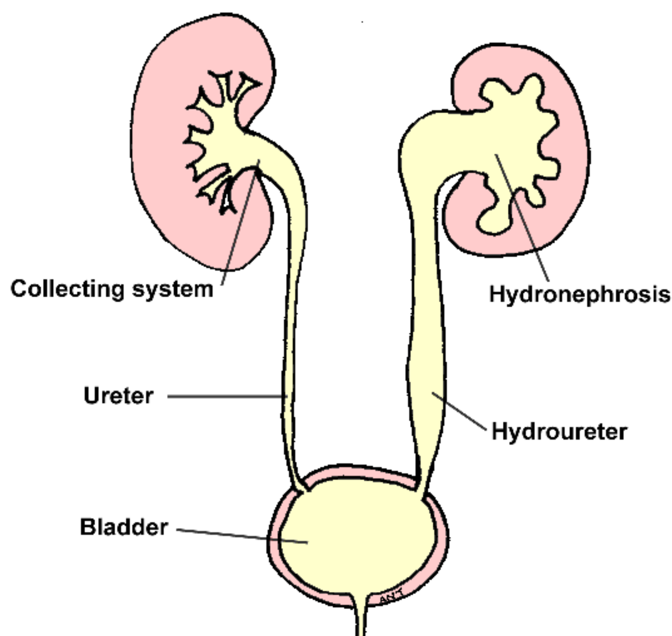
Hemodynamic changes in normal pregnancy



Normal pregnancy is characterized by an increase in cardiac output, a reduction in systemic vascular resistance, and a modest decline in mean blood pressure. These changes are associated with a 10 to 15 beat/min increase in heart rate.

RENAL TRACT

- increased renal size
- Increase vascular volume
- Relaxin causes renal vasodilatation
- Dilated palvicaliceal system – progesterone
- Dilatation of ureters more on the right
- Bladder capacity increases but pressure from uterus
- Increase Vesicoureteric reflux
- Frequency and nocturia
- Urgency and urge incontinence
- Mild hyponatraemia increase GFR reduced urea and Creatinine



GI TRACT

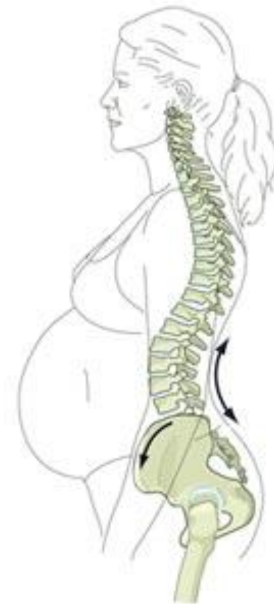
- Major effect on motility due to hormones
- Excessive salivation- ptyalism
- ? Change in taste
- Reflux 30-50% of pregnancies
- Decrease in gallbladder motility and bile lithogenicity
- Bloatedness and constipation
- Haemorrhoids

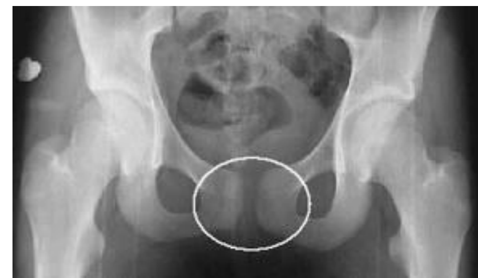
METABOLIC AND ENDOCRINE

- Hormones affect glucose and lipid metabolism
- Weight gain is due to fat, protein and water deposition
- Insulin resistance
- Increase fluctuations in glucose and insulin
- Glucose preserved for fetus
- Prolactin and human placental lactogen increase the number of pancreatic beta cells
- Growth hormone, CRH, Progesterone are diabetogenic

MUSCULOSKELETAL

- Increase force across some joint
- Maternal lordosis
- Joint laxity
- Increase mobility of sacroiliac joints
- Significant tilt of the anterior pelvis
- Low back pain is very common
- Symphysis –pubis separation is common cause of lower pelvic pain





PREGNANCY PROBLEMS

- Most conditions in pregnancy resolve in postpartum period
- women with underlying medical problems are at greater risk as these can have adverse effect on pregnancy and vice versa
  - Renal
  - Diabetes
  - Respiratory
  - Immunologic
- Preconceptual counselling??
- Conditions are often trimester specific

FIRST TRIMESTER

CASE 1

- 31 year old woman in first pregnancy, now around 10 weeks gestation, comes to see you complaining of extreme nausea and vomiting, feels weak and unable to tolerate fluids

Diagnosis?

Management?

HYPEREMESIS GRAVIDARUM

- Severe nausea and vomiting leading to dehydration and ketosis
- Dietary advice, avoid hunger
- Small snacks, avoid triggers
- Peppermint tea, avoid Iron, ginger
- Acupressure wrist bands, acupuncture
- Pharmacology
  - Pyridoxine, (Vit B6) 20 mg daily
  - Antihistamines- Cyclizine 50 mg tds
  - Dopamine antagonists- Metoclopramide (Maxolon) 10 mg tds
  - Serotonin antagonists- Ondansetron 4 mg bd
- IV fluids
- Thiamine- 50 mg daily and Folate 40 mcg replacement (Wernicke's)

CASE 2

- 34 year old woman, 8 weeks into current pregnancy, previous miscarriage, seeing you today as emergency as woke up with blood stained underwear

Diagnosis

Management

BLEEDING

- PV bleeding
  - Common 20-40%
    - 50% miscarry
  - Virtually always maternal
  - Disruption of decidual blood vessels
  - Multiple causes
    - Threatened miscarriage
    - Ectopic pregnancy
    - Implantation bleed
    - Cervical pathology
    - Trophoblastic disease

BLEEDING

- PV bleeding
  - History most important
  - Risk factors
  - Presence of pain
  - History of miscarriage
- Examination
  - Abdominal
  - Vaginal
    - Cervix open or closed
    - Products seen if so to be removed
    - Pregnancy in presence of coil, this should be reomoved

SECOND TRIMESTER

SECOND TRIMESTER

- Obstetric quiescence
- Advice on diet
- Healthy lifestyle, smoking cessation
- BP should now dip
- Risk of miscarriage still present but much less
- Hyperemesis may continue into second and third trimester

THIRD TRIMESTER

Patient seen in surgery now 32 weeks pregnant, has swelling of ankles and headache. BP 147/98

Diagnosis

Management

HYPERTENSION

- Most hypertension in pregnancy occurs for the first time in second half of pregnancy
- Without proteinuria– Gestational hypertension
- With proteinuria– Pre-eclampsia

HYPERTENSION

- Pregnant women with uncomplicated chronic hypertension- keep BP lower than 150/100
- Mild : systolic 140-149/ 90-99
- Mod: 150-159/100-109
- Severe:>160/110
- Chronic hypertension <20 weeks
- Gestational hypertension >20 weeks
- Refer for secondary care if any concerns regarding hypertension

HYPERTENSION

- Women at high risk of pre-eclampsia should be given 75 mg aspirin daily from 12 weeks until delivery
  - Renal disease
  - SLE
  - Diabetics
  - Previous pre-eclampsia
  - BMI >30
  - Age >45
  - Multiple pregnancy
  - ? First pregnancy
  - Family history of Preeclampsia

HYPERTENSION

- ACE inhibitors contraindicated and should discontinue
- Most antihypertensive treatment has effect on placental blood flow and therefore fetal growth should be monitored
- Diuretics should not be used
- Labetalol 200 mg up to tds now first line, methyldopa 250 mg tds and nifedipine 5 mg bd can be used in conjunction
- Aim BP <150/100 or < 140/90 if target organ damage

HYPERTENSION

- Warn patients to see healthcare professional if:

  - Severe Headache
  - Visual problems
    - Blurred vision
    - Fashing lights
  - Severe pain below ribs
  - Vomiting
  - Sudden swelling of hands or feet

- 33 year old para 1, 32 weeks pregnant, BMI 29 at booking, has large baby on board and dipstick in practice shows 3+ glycosuria

Diagnosis

Management

DIABETES

- Diabetes 150 million people worldwide
- WHO prediction that there will be a 35% increase between 1995 and 2025
- Type 1 Diabetes
  - Immune cell mediated destruction of beta cells in pancreas)
- Type 2 Diabetes
  - Relative rather than absolute Insulin deficiency
- Impaired glucose tolerance
- Gestational Diabetes Mellitus (GDM)
  - 20-50% will develop type 2 Diabetes

RISKS

- Risks to woman and fetus
  - Miscarriage
  - Pre eclampsia
  - Preterm labour
  - Retinopathy
  - Stillbirth
  - Congenital malformations
  - Macrosomia
  - Birth trauma
  - Perinatal mortality
  - Postnatal hypoglycaemia

SCREENING

- Screen if :
  - BMI >30kg/m2
  - Previous baby >4.5kg
  - Previous GDM
  - First degree relative with Diabetes
  - Family origin
    - South asian
    - Black Caribbean
    - Middle eastern

TREATMENT

- Diet
- If diet over 1-2 weeks not effective then start medication
- Regular rapid acting Insulin, insulin analogues, Metformin and Glibenclamide may be considered.
- Metformin may be used before and during pregnancy, as well as or instead of Insulin
- Rapid acting Insulin analogues (aspart and lispro) are safe to use during pregnancy

As soon as pregnancy is confirmed stop oral hypoglycaemic agents apart from Metformin and start Insulin if required

- 28 year old para 0 is 35 weeks presents with intense itching
- On examination has rash all over body

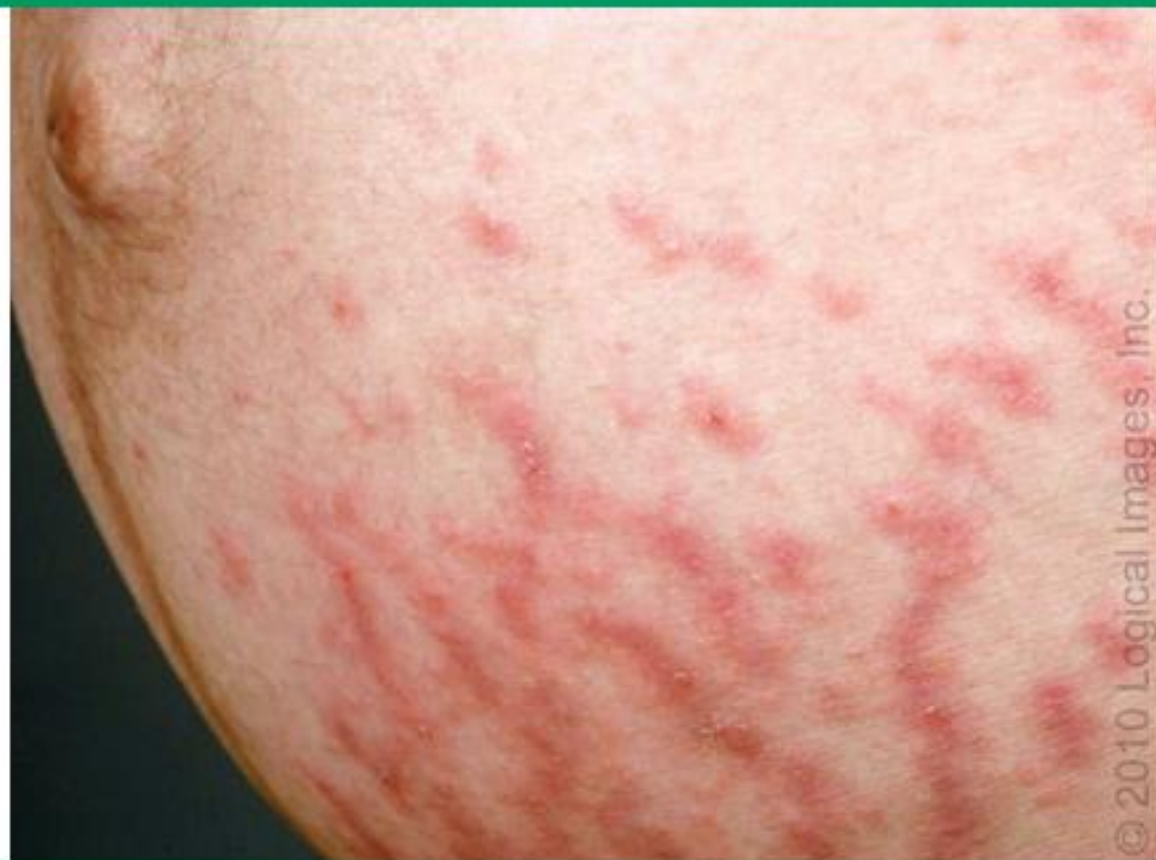
Diagnosis

Management

POLYMORPHIC ERUPTION

- 1:160 pregnancies
- 76% in first pregnancy
- Pruritic eruption in lower abdomen
- Striae
- Umbilical sparing
- No autoimmune association
- Steroids are mainstay of treatment and emollients

PUPPP



Erythematous plaques in the distribution of striae are present. Note the sparing of the periumbilical skin.

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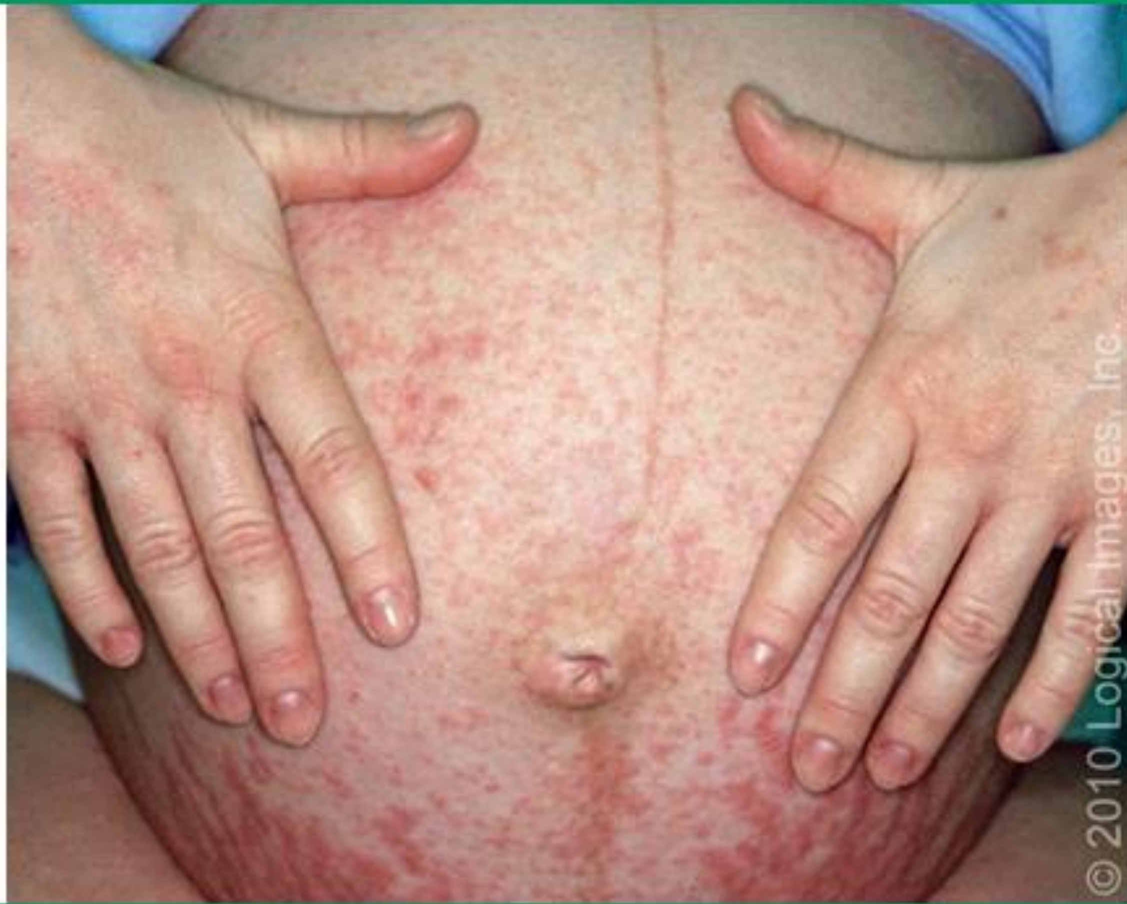
PUPPP



Erythematous papules and plaques with accentuation in abdominal striae and relative sparing of the umbilicus are present on this patient with PUPPP. Erythematous papules are also visible on the hands.

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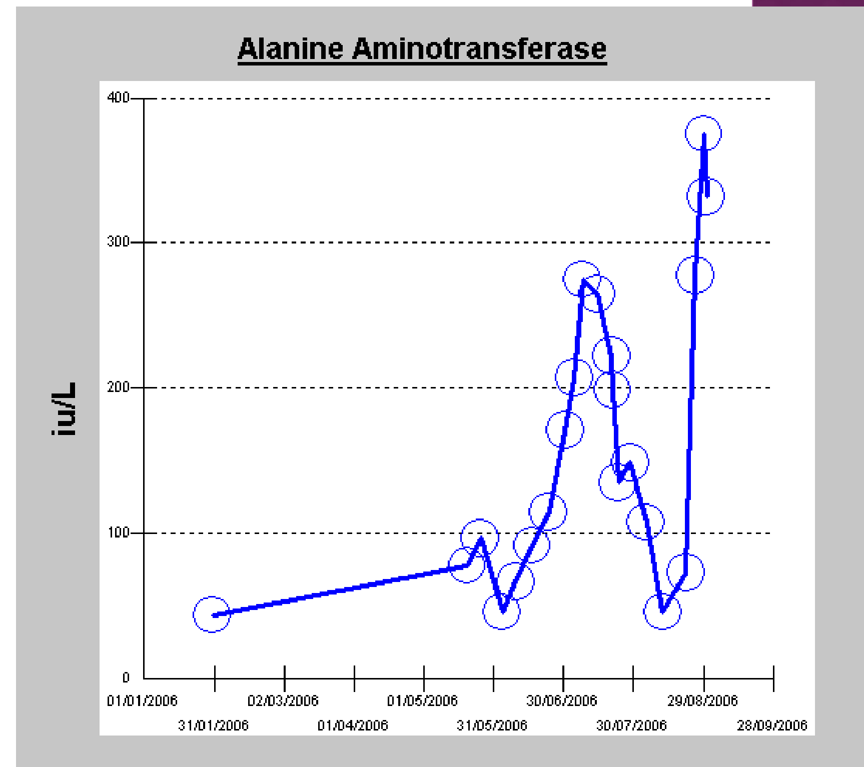
- 28 year old para 0 35 weeks presents with intense itching mainly over palms of hands and soles of feet
- No rash seen

Diagnosis

Management

OBSTETRIC CHOLESTASIS

- Obstetric Cholestasis, or Intrahepatic cholestasis of pregnancy is unique to pregnancy
- Incidence is ~ 1% although highest in Chile ~ 12%
- More common in women of Indian and Pakistani descent
- This variation suggest genetic component to condition, risk factors include history in sisters



DIAGNOSIS

- Classic symptom is pruritis without rash, often described as ‘all over’ or ‘on the legs’ and worse on palms and soles
- Although variable pattern of itching
- Dark urine, Pale stools, although this uncommon
- Abnormal liver function tests
- ***Remember diagnosis of exclusion***

PREGNANCY

- Fetal risks
  - Intrapartum fetal distress
  - Meconium liquor
  - Preterm delivery
  - Intrauterine death
  - Fetal intracranial haemorrhage
- Exact magnitude of risks is difficult to determine

MANAGEMENT

- Drugs:
  - Vitamin K 10 mg orally once day especially if prolonged prothrombin time ideally from 32 weeks
  - Ursodeoxycholic acid reduces proportion of hydrophobic bile acids
    - Improves itching
    - Improves transaminitis
    - Reduces bile acid concentration
    - Start 250 bd and max 750 bd

- 33 year old nursery teacher has come into contact with child who has chicken pox, she is seeing you for advice and has heard that this is dangerous in pregnancy

CHICKEN POX

- Varicella Zoster (Chicken pox)
  - Fetal varicella syndrome before 28th week of pregnancy
    - Skin scarring, eye defects, limb hypoplasia
    - Growth restriction
    - Neurological abnormalities, microcephaly, cortical atrophy , mental retardation
  - Varicella of the newborn if chicken pox around the time of birth, mainly during last month
  - If VZ V neg and contact then need immunoprophylaxis VZIG- expensive
- Maternal chicken pox can be severe and cause pneumonitits- acyclovir usually administered
  - Avoid acyclovir <20 weeks

CHICKEN POX

- 90% of population are immune
- Primary VZV infection is very rare
- Accurate history of exposure
  - Incubation period 1-3 weeks
  - Disease infectious 48 hours before rash appears
- If VZ neg then should be given VZIG
- VZIG is effective up to 10 days after contact
- No point using this if chicken pox has already developed
- ? Vaccination

- 25 year old woman who is in her first pregnancy has read online that she can buy a test for group B strep infection, she saw an episode on a popular TV series that a newborn died of this condition as is really anxious – She is keen to get some advice

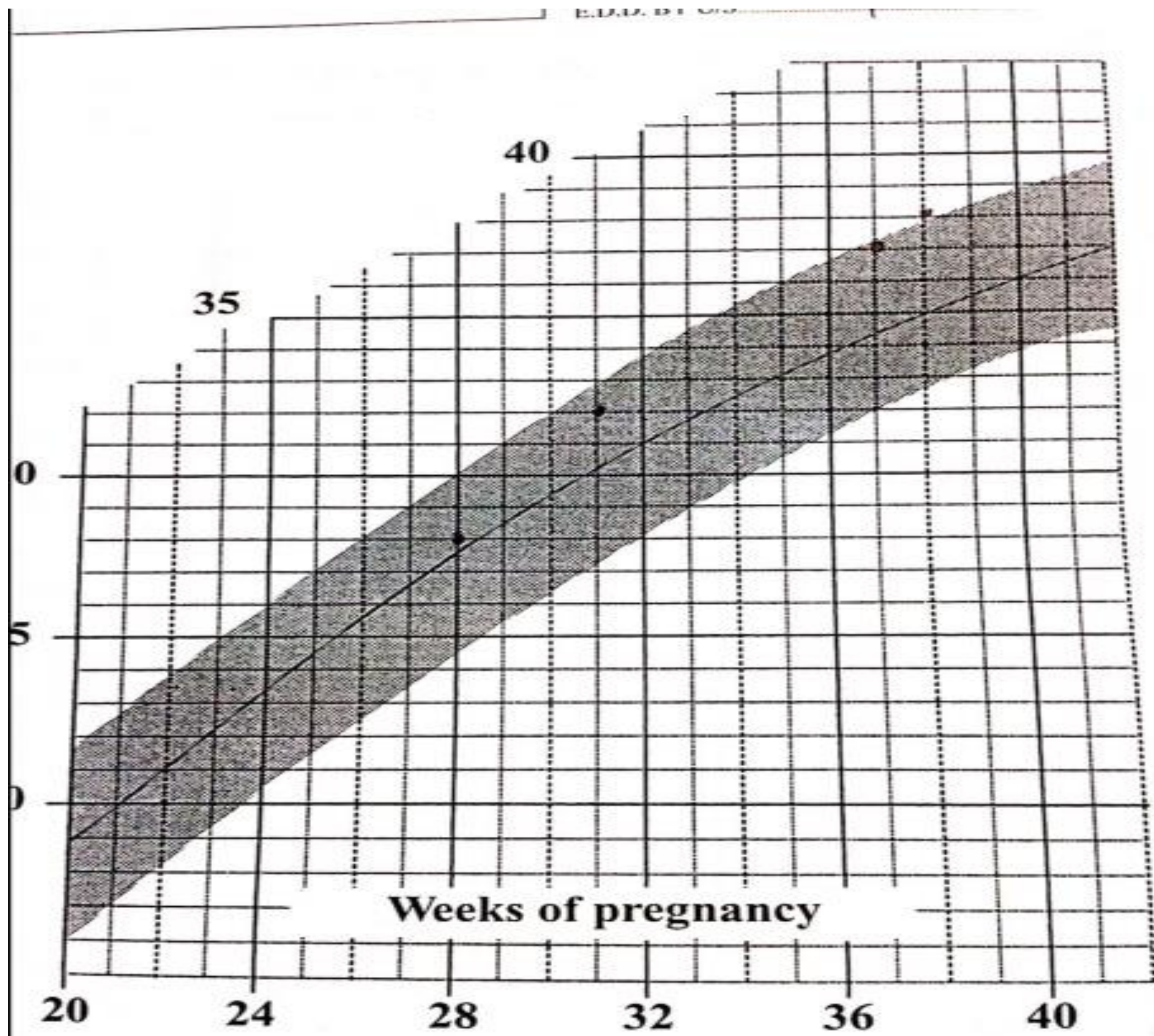
GROUP B STREPTOCOCCUS

- Cause of severe neonatal infection <7 days of birth
- Incidence is 1/2000 births
- Routine screening not recommended in Uk
- Antenatal antibiotic prophylaxis does not reduce incidence as colonisation can recur
- If previous pregnancy was affected then no prophylaxis is necessary- risk increases to 1/1000 births
- Intrapartum prophylaxis only if colonisation occured in current pregnancy
- Vaginal swabs only to be taken if clinically indicated (21% are carriers)

- 22 year old slim para 0 seeing you in surgery as worried. Her pregnant friends have noticed that her bump is smaller than hers and wants some advice

FETAL GROWTH

- Check for risk factors
  - Smoker
  - Previous IUGR baby
  - Medical conditions in mother
  - Previous stillbirth
  - Maternal SGA
- If no risk factors then no need for ultrasound surveillance
  - Unless symphysio-fundal height measurement from 24 weeks indicates risk of SGA baby



Fundo-Symphysis Height Chart

VITAMIN D

- Deficiency common in northern Europe esp women with pigmented skin
  - Lack of sunlight
  - More common in winter months
- Associations:
  - Preeclampsia
  - Low Birth weight
  - Glucose intolerance
  - Neonatal hypocalcaemia
    - Seizures
  - Skeletal Growth in Baby
  - Fetal Lung problems and reduced immunity

VITAMIN D

- Screening
  - No data for universal screening as yet
    - Testing is expensive
  - Selective screening suggested in high risk women
    - Dark skinned women
    - Skin coverage
    - Gastrointestinal problems / Malabsorption
    - Alcohol abuse
    - History or preeclampsia
- UK CMO
  - All women should be informed of importance of Vitamin D and take 10 mg (400iu) daily

VITAMIN D

- Supplementation recommended in women in UK

Table 1. Supplementation and treatment recommendations

	Daily units	Combined with
Supplementation		
Vitamin D	400[a] 800[b] 1000[c]	N/A Calcium[67] N/A
Treatment		
Cholecalciferol	2800	20 000 iu a week
Ergocalciferol	2800[d]	10 000 iu 2x weekly

[a] Recommended for all pregnant women
[b] Recommended for women with high risk of pre-eclampsia
[c] Recommended for women at high risk of vitamin D deficiency
[d] To be taken through and after the high-dose supplementation

RCOG Scientific Impact paper June2014

QUESTIONS