



MANAGEMENT OF PREGNANCY WITH PRE-ECLAMPSIA

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CARDIOVASCULAR CHANGES IN PREGNANCY




Blood volume:

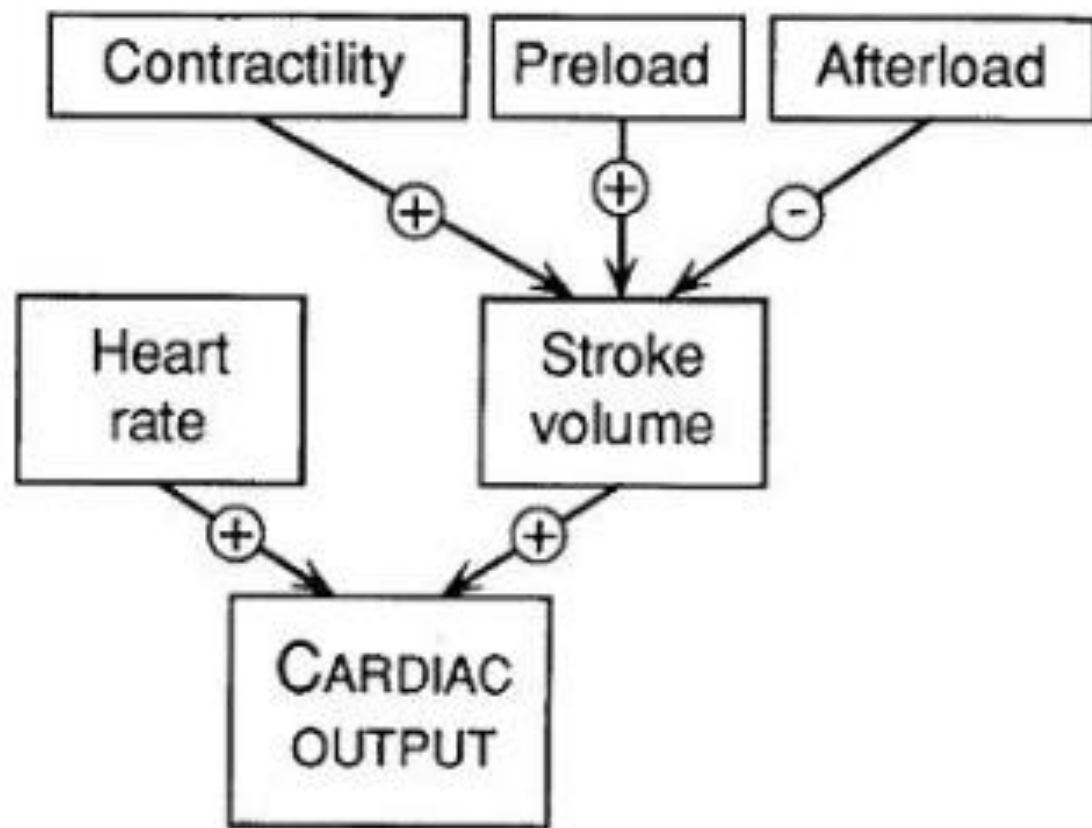
Increases between 30-50%



Cardiac rhythm increases:

10 to 15 beats per minute

- Cardiac Output (CO) = Stroke Volume (SV) x Heart Rate (HR) 



PRE ECLAMPSIA

- Pregnancy – related disease process evidenced by increased blood pressure and proteinuria
- Preeclampsia is a pregnancy-specific disorder involving widespread endothelial dysfunction and vasospasm that usually occurs after 20 weeks of gestation

Predisposing factors:

1. Said to be a disease of primiparas – higher incidence in primiparas below 17 & above 35 years.
2. Low socio economic status (low protein intake)
3. History of chronic hypertension on the mother, h-mole, diabetes mellitus, multiple pregnancy, polyhydramnios, renal disease, heart disease
4. Hereditary

Causes:

1. Unknown
2. Protein deficiency theory
3. Uterine ischemia
4. Increased sensitivity to vasopressors

Preeclampsia

There are several warning signs of preeclampsia that you should not ignore.



swelling



protein
in the urine



arterial
hypertension

VASOSPASM

VASCULAR EFFECTS



VASOCONSTRICTION



POOR ORGAN
PERFUSION



INCREASED BP

KIDNEY EFFECTS



DECREASED

GLOMERULI FILTRATION
RATE & INCREASED
PERMEABILITY OF

GLOMERULI MEMBRANES



SERUM BLOOD

UREA NITROGEN, URIC
ACID, CREATININE

DECREASED URINE OUTPUT
& PROTEINURIA



INTERSTITIAL EFFECTS



DIFFUSION OF FLUID
FROM BLOOD STREAM
INTO INTERSTITIAL
TISSUE

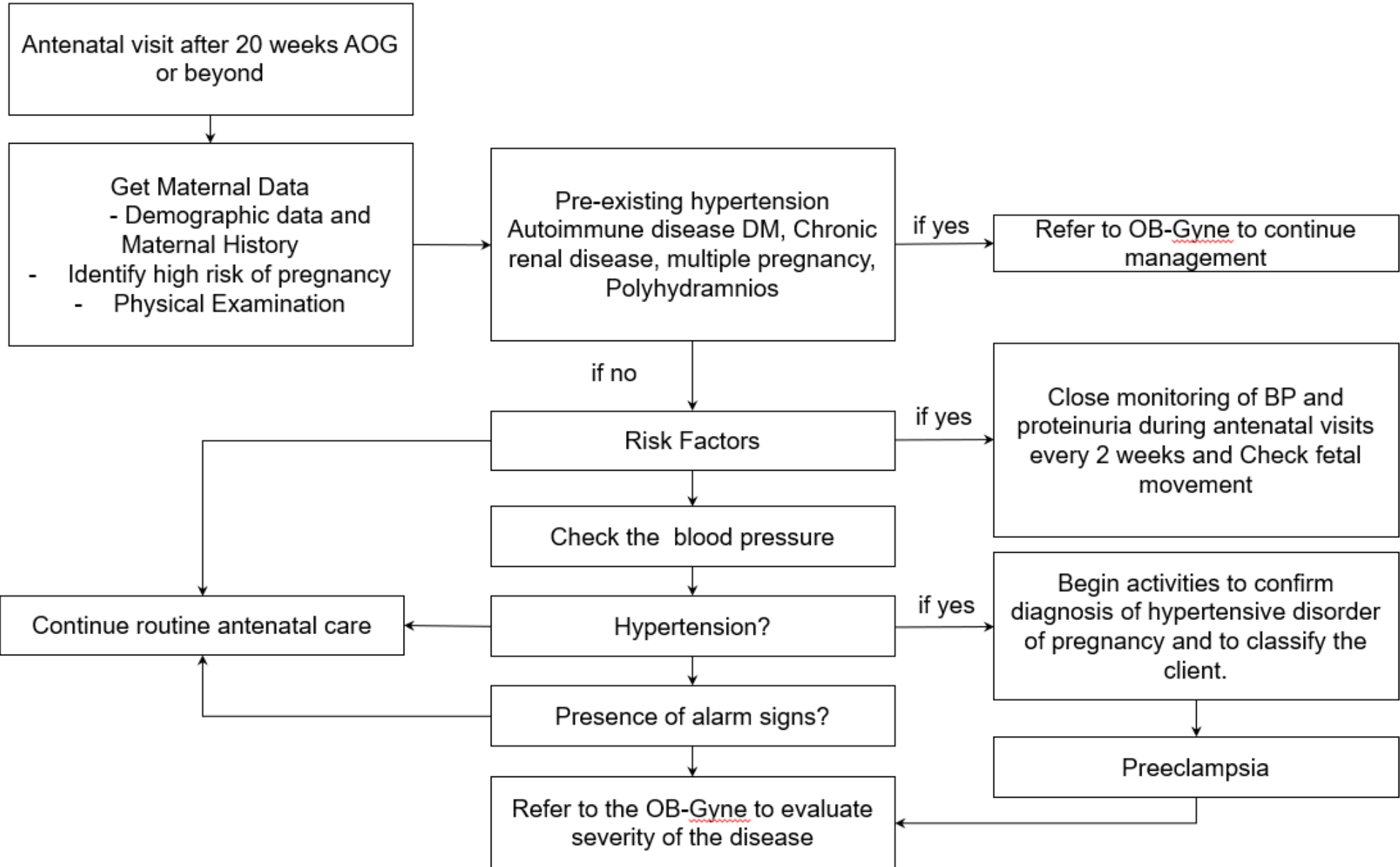


EDEMA

mgmp

SIGNS & SYMPTOMS:

S & SX	MILD PREECLAMPSIA	SEVERE PREECLAMPSIA
BLOOD PRESSURE	140/90; Systolic elevation of 30 mm/Hg Diastolic elevation of 15 mm/Hg	160/110
Proteinuria	+1 to +2 300 mg/24 hour urine collection	+3 to +4 or 5 g/24 hour urine collection <small>mg/24hr</small>
Edema	Digital edema (+1 +2) Dependent edema	Pitting edema (+3 +4) Generalized edema
Weight Gain	2 lb/week	More rapid weight gain
Urinary Output	Not less than 500 ml/24 hours	Less than 500 ml/24 hours
Headache	Occasional headache	Severe headache
Visual Disturbances	Absent	Photophobia, blurring spots before the eyes
Epigastric pain	Absent	Right upper quadrant pain (aura to convulsion)



Monitoring of blood pressure and fetal movements at home

LABORATORY TESTS

- Blood tests to check the kidney and liver functions
- Urine tests to watch proteinuria
- Perform a BPS ultrasound to look at the size of the fetus
- Perform a BPS ultrasound to assess the amniotic fluid volume
- Perform a BPS ultrasound to monitor fetal heart tone, fetal breathing and fetal reactivity

Management:

A. Ambulatory management

1. Home management is allowed only if:
 - A. BP is 140/90 or below
 - B. There is no proteinuria
 - C. There is no fetal growth retardation
 - D. The patient is not a young primipara.
2. Bed rest – the woman should be in bed rest for most part of the day & free from physical & emotional stress.
3. The woman should consult the clinic as often as necessary.
4. Diet should be high in protein & carbohydrates with moderate sodium restriction.

5. Hospitalization is necessary if condition worsens.
6. Provide detailed instructions about warning signs:
 - A. Epigastric pain –aura to convulsion
 - B. Visual disturbances
 - C. Severe continuous headache
 - D. Nausea & vomiting

B. Hospital management:

1. BP GOES ABOVE 140/90 mm hg
2. Bed rest is one of the most important principles of care.
 - A. Rest in left lateral position to promote blood supply to the placenta & the fetus.
 - B. Leave BP cuff on patient's arm so as not to disturb the patient when placing it every time BP is checked.

**THANK YOU FOR
LISTENING**

Good morning.