

German Guideline „Diagnostik und Therapie hypertensiver Schwangerschaftserkrankungen“ 2007

- Classification
- Prediction and Prevention
- When ambulatory controls?
- Fetal and maternal assessment in the hospital
- Therapy
- Planning delivery?
- Management following delivery

Classification (according to ISSHP)

- Gestational Hypertension
- Preeclampsia („Gestose“)
 - Moderate preeclampsia
 - Severe preeclampsia
- Eclampsia
- HELLP-Syndrome
- Chronic hypertension
- Superimposed Preeclampsia

Chronic hypertension Superimposed Preeclampsia

- RR > 140/90 mmHg before 20 weeks of gestation or persisting > 12 weeks post partum (low risk)
- Superimposed preeclampsia if de novo proteinuria or sharp increase in proteinuria (high risk)

Gestational Hypertension

- RR > 140/90 mm Hg after 20 Weeks of gestation
- Blood pressure measurement:
 - 45 degree angle, sitting. Cuff at level of heart
 - Multiple measurements
 - Korotkoff phase 5
 - 24 h blood pressure measurement to exclude „white coat hypertension“

Preeclampsia („Gestose“)

- Gestational Hypertension
- and >1 dipstick urine
 - Validation with protein/creatinine ratio or 24 h urine collection ($>300\text{mg}/\text{die}$)
- Or
 - Fetal growth restriction
 - Liver-, renal- neurological, and hematologic abnormalities

HELLP-Syndrome

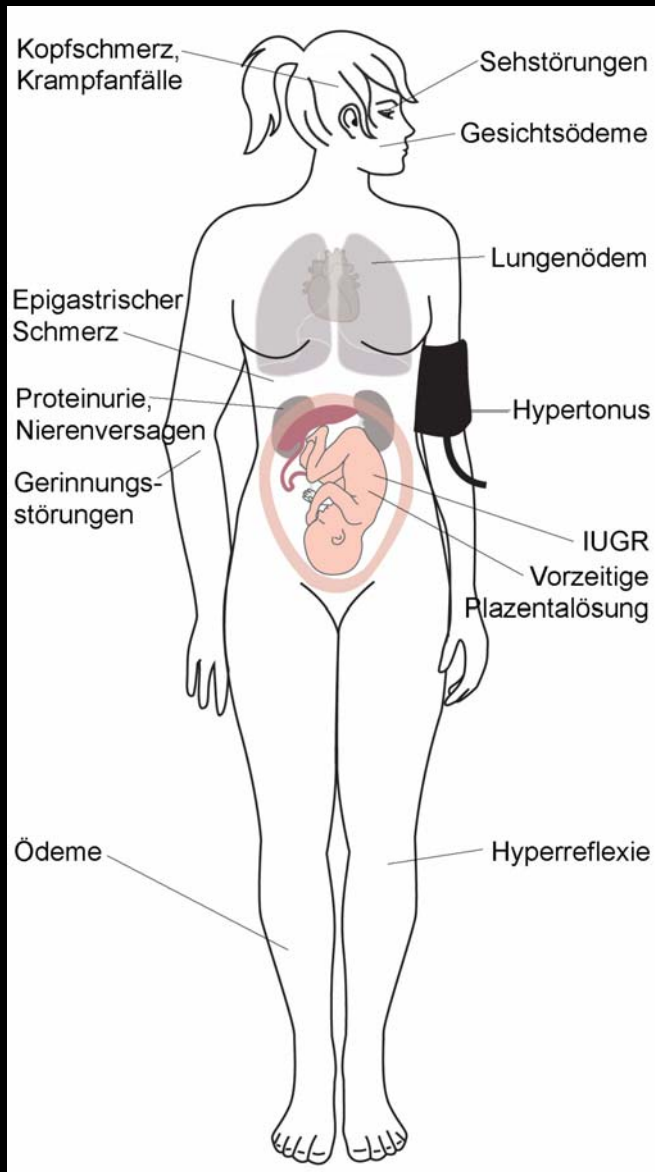
- H: Haptoglobin ↓; LDH ↑↑
- EL: GOT, GPT ↑↑
- LP: Thrombocyte < 100.000/μl
 - Epigastric pain > 90%
 - Hypertension 80%
 - Proteinuria 90%

HELLP-Syndrome: conservative treatment?

- Severe preeclampsia absent
- < 34 weeks of pregnancy
- Reassuring fetal assessment and normal fetal growth
- Methylprednisolon 32 mg/die i.v. or dexamethason 10-20 mg/die i.v.
- **CAVE: It is a consensus that conservative treatment of HELLP-Syndrome is not justified in most of the perinatal Centers in Switzerland**

Preeclampsia („Gestose“)

Severe preeclampsia



- Preeclampsia („Gestose“)

- Moderate preeclampsia

- Severe preeclampsia

- RR > 170/110 mm Hg

- Proteinuria > 5g/die

- HELLP-syndrom

- Oliguria

- Lung edema, cyanosis

- Severe neurological symptoms (severe head ache, visual disorders, psychiatric symptoms)

Eclampsia

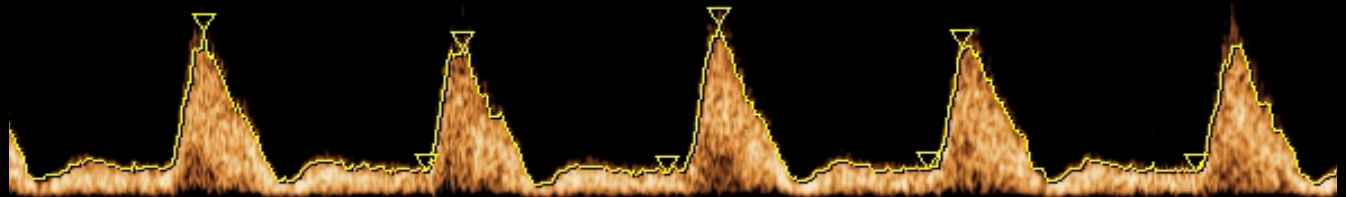
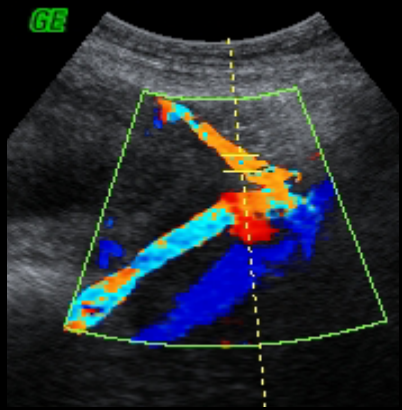
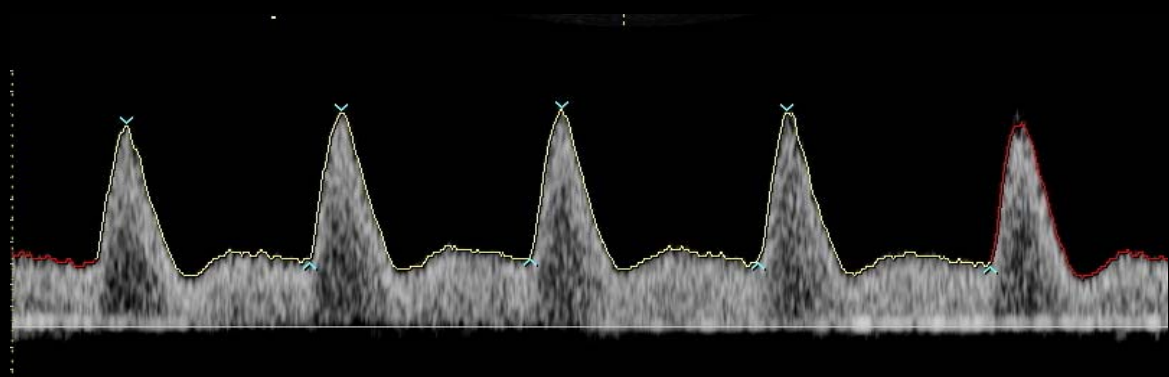
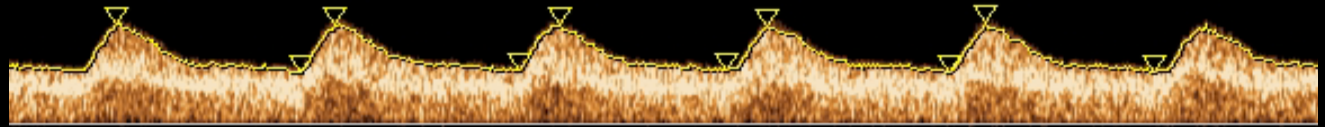
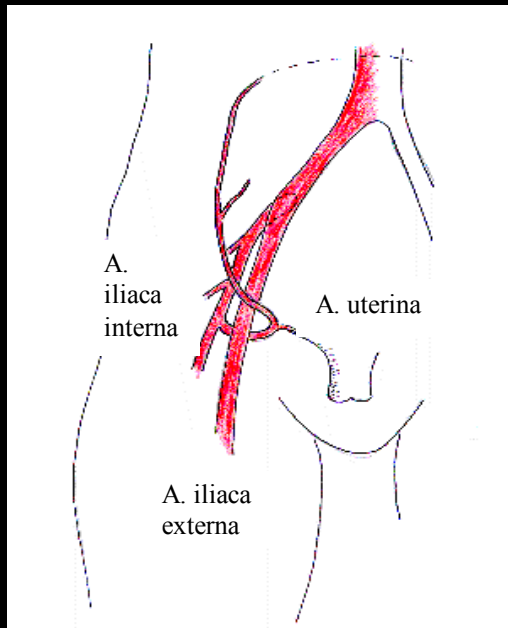
- 1:2000 deliveries; 1:20 cases of severe preeclampsia
- Prophylaxis (Maggie-Trial) and therapy (Eclampsia Trial)
 - 4g Mg-sulfate n 15-20 min
 - 1g/h maintained for 24/48 h after seizure
- Intensive care after eclampsia (ABC plus PSR, urine > 100 ml/4h, respiratory function)
- Delivery after stabilization of eclampsia

Prediction and Prevention

- Prediction
 - Personal and familial history
 - Uterine doppler: bilateral notching at 22-24 weeks of gestation
- Prevention
 - ASS in women with a history of severe preeclampsia beginning with 16 weeks of gestation

Prediction and Prevention

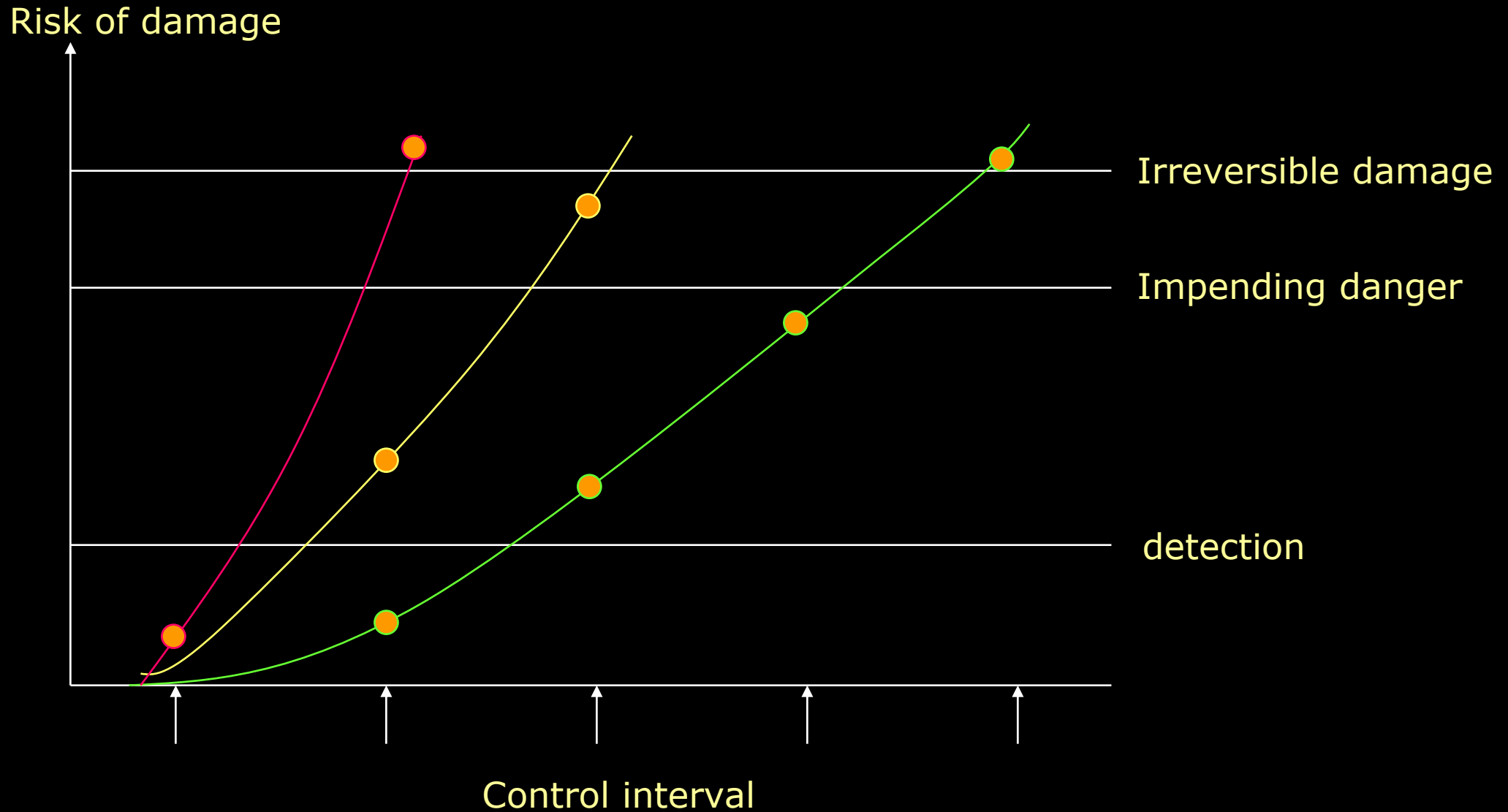
	Faktor der Risiko-Erhöhung
erste Schwangerschaft	2-3
PE in vorangegangener SS	4-10
präexistenter Hypertonie	4-10
präexistenten Nierenerkrankungen	4-10
erhöhter BMI	2-3
jugendliche oder „ältere“ Erstgebärende	2-3
Mutter / Schwester hatte PE	4-6
große Plazenta	4
Autoimmunerkrankungen	4-20



When ambulatory controls?

- If only gestational Hypertension or chronic hypertension is present
- Recommend home blood pressure recording and weight control
- Adequate control intervals

The adequate control interval

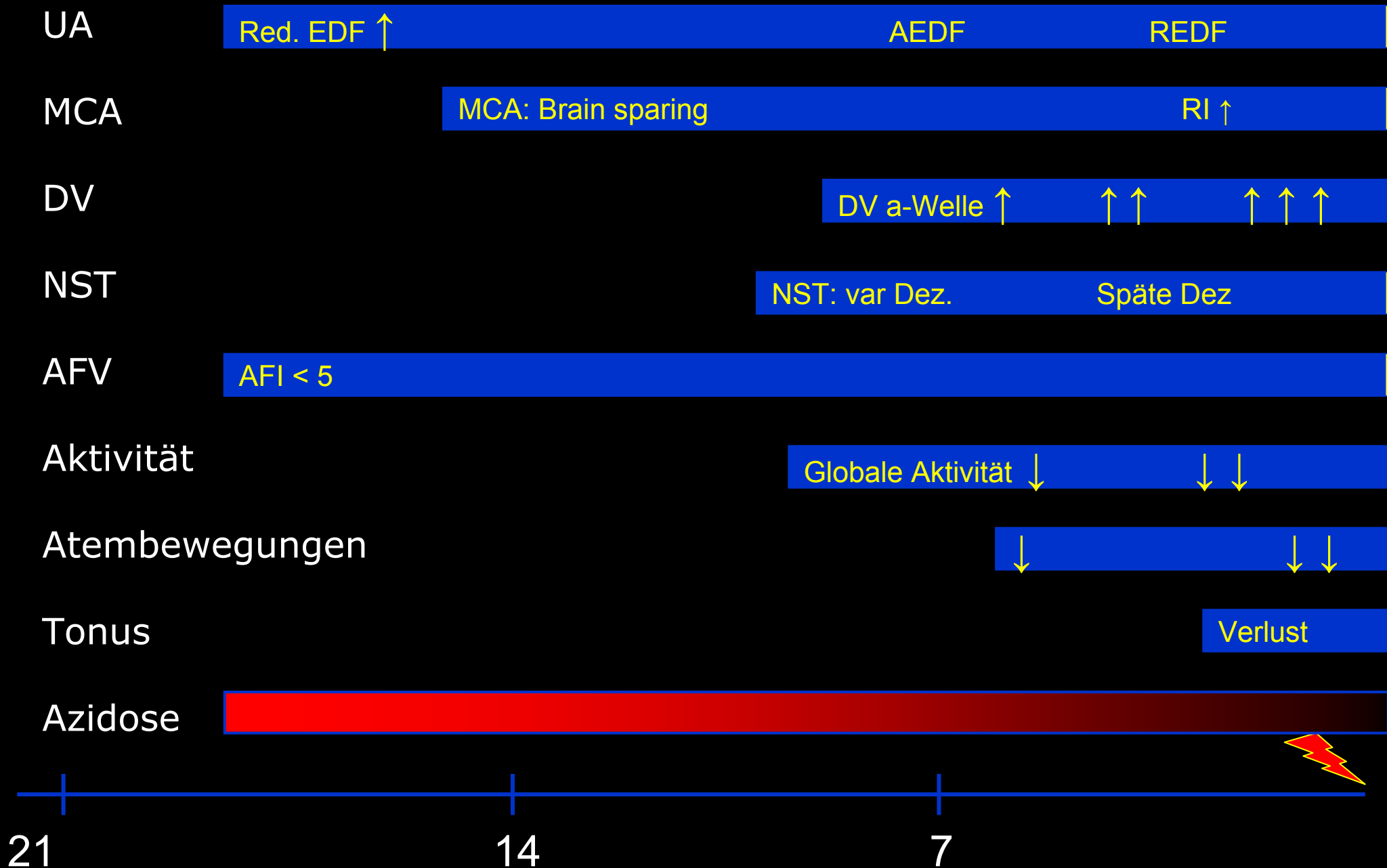


When admission to hospital?

- Diagnosis of preeclampsia or severe preeclampsia
- RR > 160/100 mm Hg
- Epigastric pain and gestational hypertension
- Impending fetal distress
 - Abnormal CTG
 - Intrauterine growth restriction
 - Reduced amount of amniotic fluid
 - Abnormal doppler result of the UA

Fetal and maternal assessment in the hospital

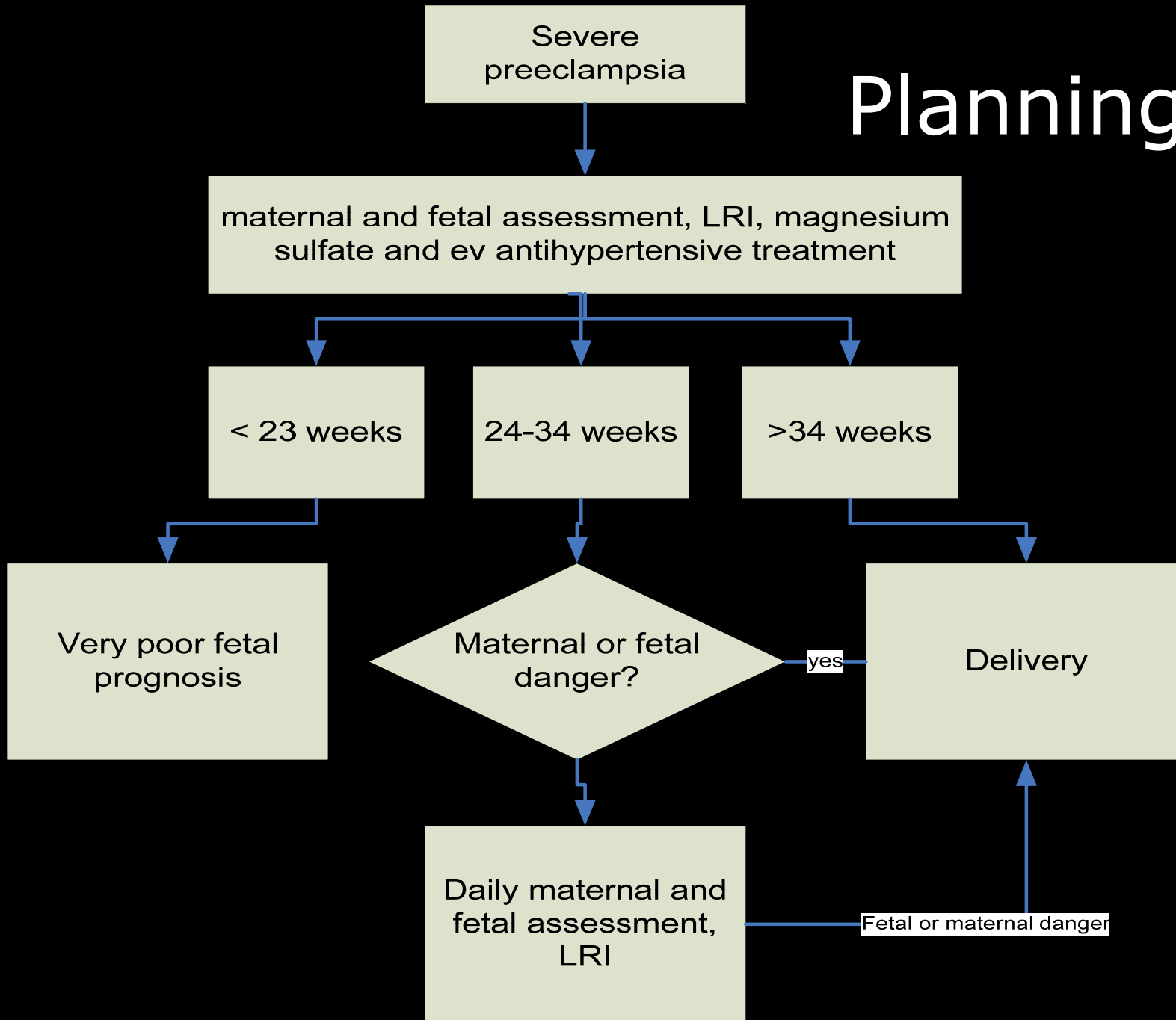
- Blood pressure monitoring
- 24 h urine control for protein
- Daily body weight control (close fluid balance in severe cases) and clinical evaluation
- Laboratory evaluation (daily — weekly)
 - Blood count, liver function, clotting studies, renal function
- CTG 1-3/die
- Fetometry every 10-14 days; AFI
- Doppler sonography daily — weekly
- RDS prophylaxis (24-34 weeks of gestation)
- Mg-sulphate (at least in severe cases and peripartum)



maternal therapy

- Blood pressure treatment if
 - > 170/110 mm Hg in healthy women
 - > 140-160/90-100 in women with preexisting disease
- Medicaments for oral long-term treatment
 - Methyldopa
 - (oral nifedipine, β -blocker metoprolol, dihydralazine)
 - Not suited: diuretics, ACE-blocker, AT1-antagonists, atenolol
- Medicaments for treatment of severe hypertension:
 - Oral nifedipine: 5 mg every 20 min, then retarded release preparations
 - Urapidil
 - Dihydralazin: 5 mg i.v., then 2-20mg/h with perfusor

Planning delivery



Management following delivery

- Continue close maternal observation and Magnesiumsulphate for at least 24 -48h
- Evaluate necessity of antihypertensive treatment
- Breast feeding is possible
- Offer a formal postnatal review to discuss the events of the pregnancy
- Follow up after 6 weeks
- Offer preconceptional counselling

Management following delivery

- Long term prognosis after preeclampsia?