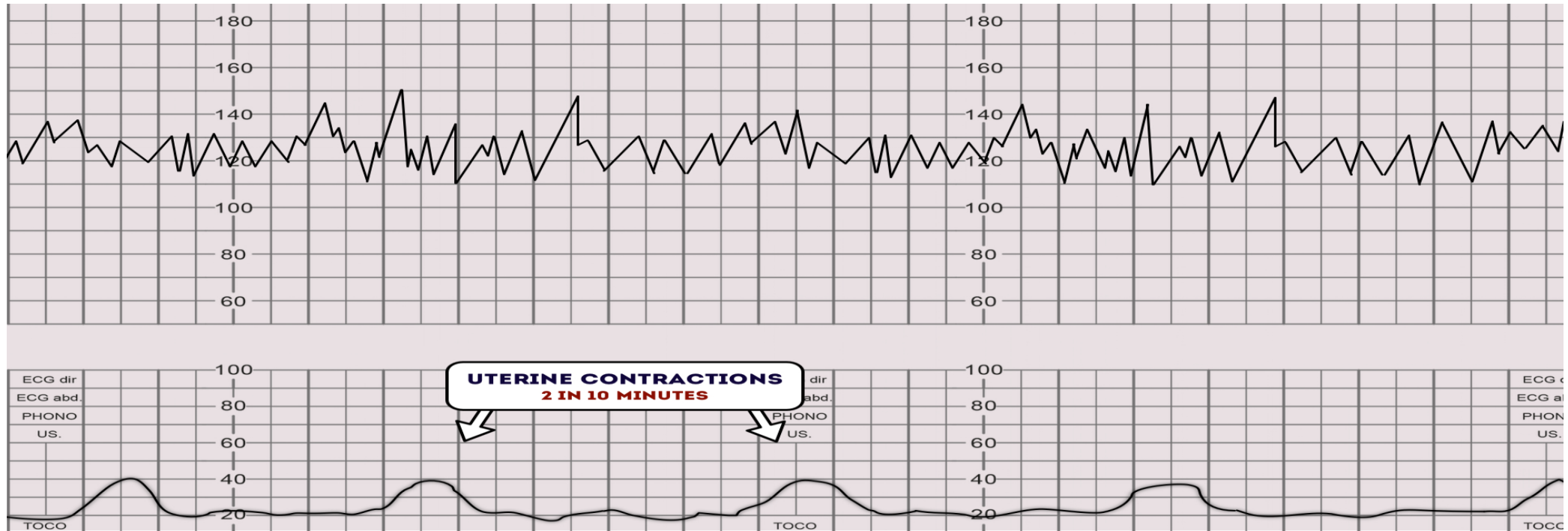


CTG Examples

Dr Amal Barakat
September/2024

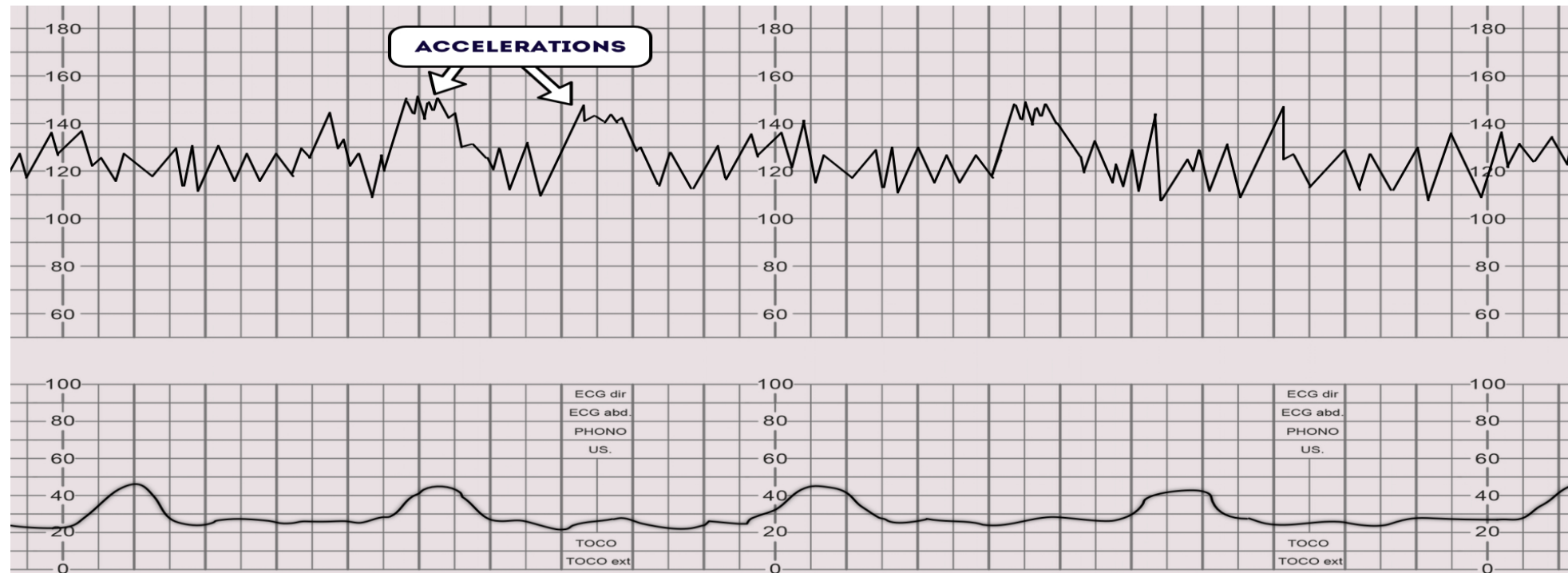
Normal CTG



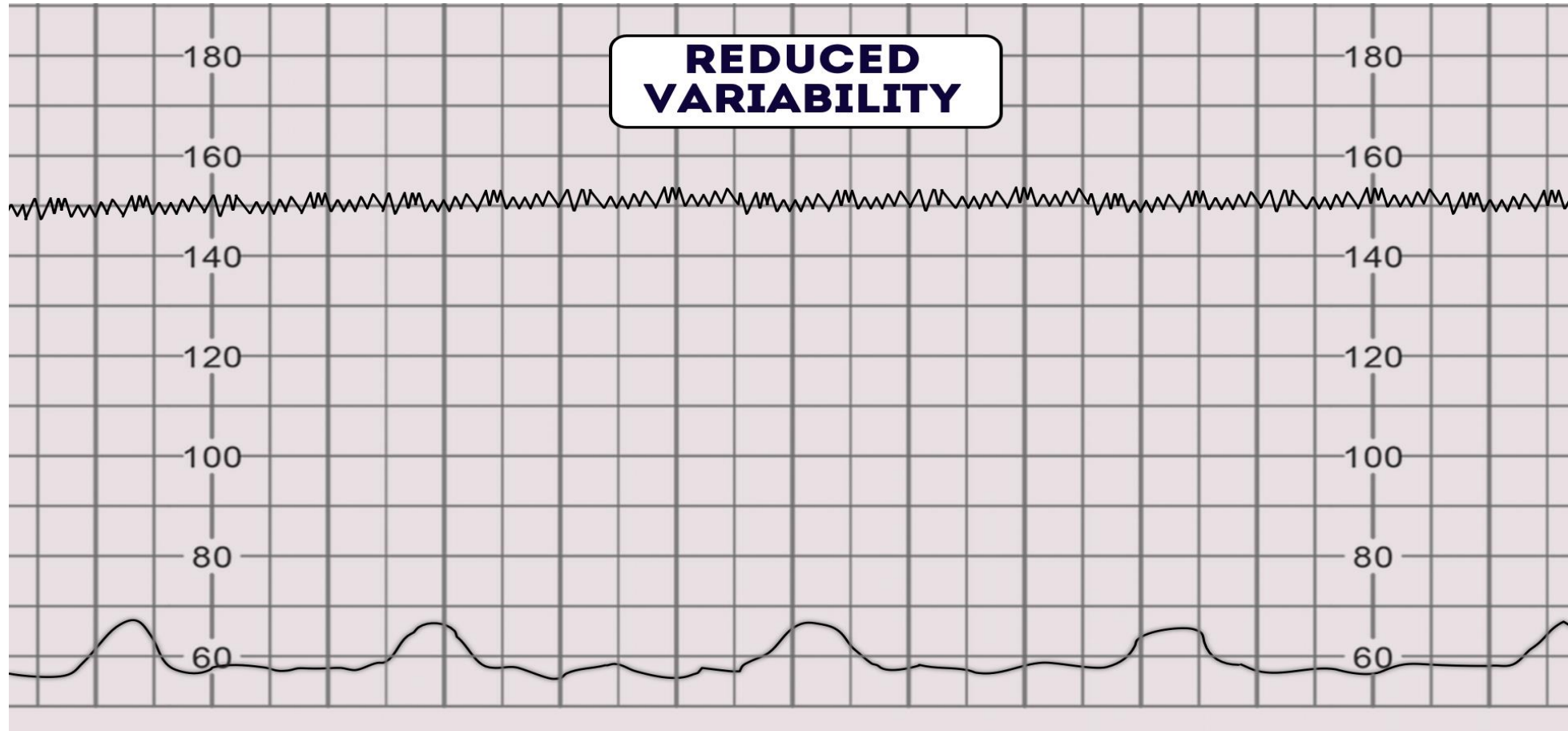
CTG

- **Record the number & duration of the contractions present in a 10 minute period.**
- **Comment on:**
 - **Baseline (110-160 B/M)**
 - **Variability (5-25)**
 - **Acceleration**
 - **Deceleration**

The presence of accelerations is reassuring
The absence of accelerations with an otherwise normal CTG is
of uncertain significance



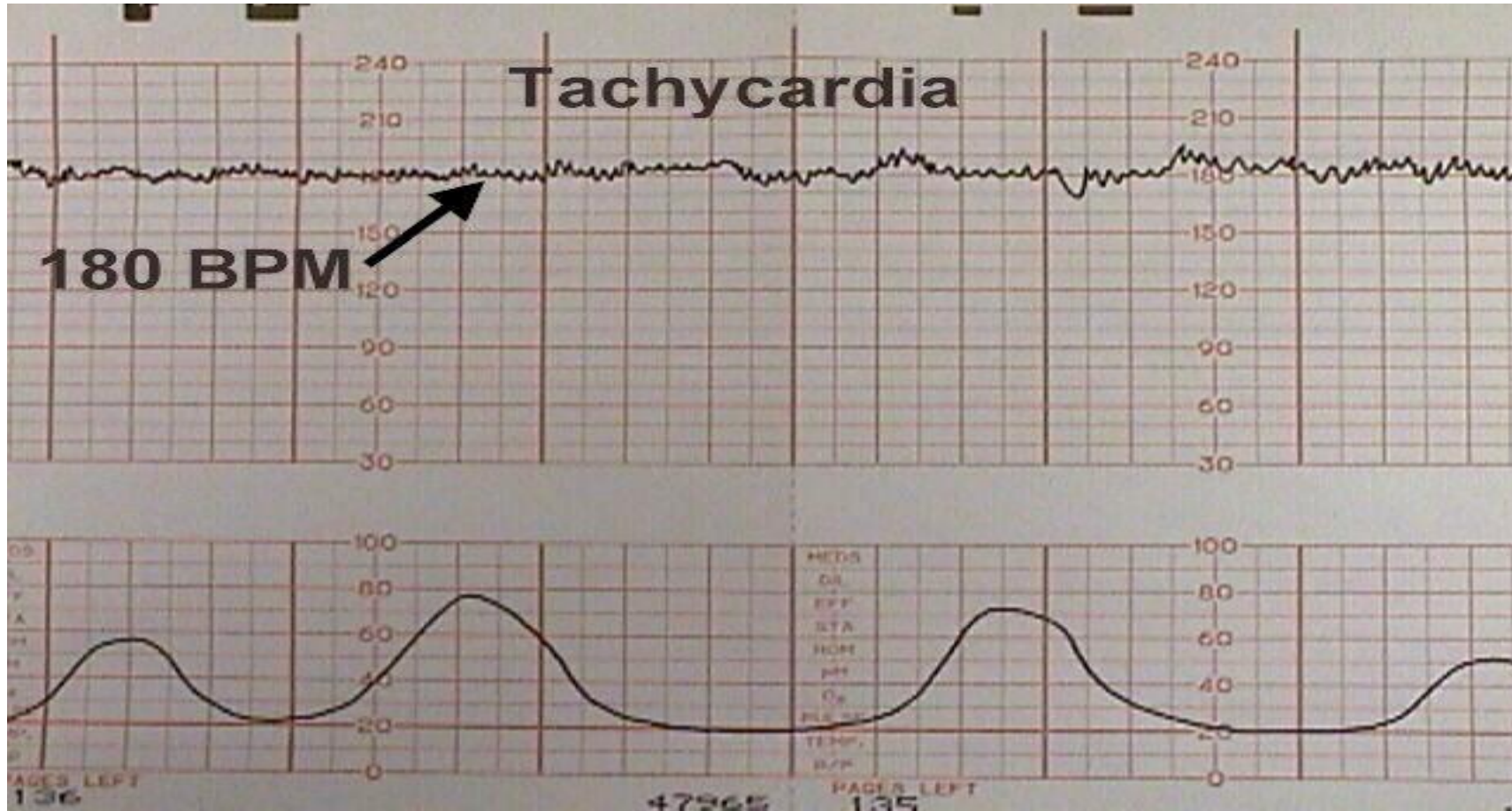
Reduced variability



Reduced variability

- **Reduced variability can be caused by any of the following:**
- Fetal sleeping: this should last no longer than 40 minutes (this is the most common cause)
- Fetal acidosis (due to hypoxia): more likely if late decelerations are also present
- Fetal tachycardia
- Drugs: opiates, benzodiazepines, methyldopa, dexamethasone and magnesium sulphate.
- Prematurity: variability is reduced at earlier gestation (<28 weeks)
- Congenital heart abnormalities

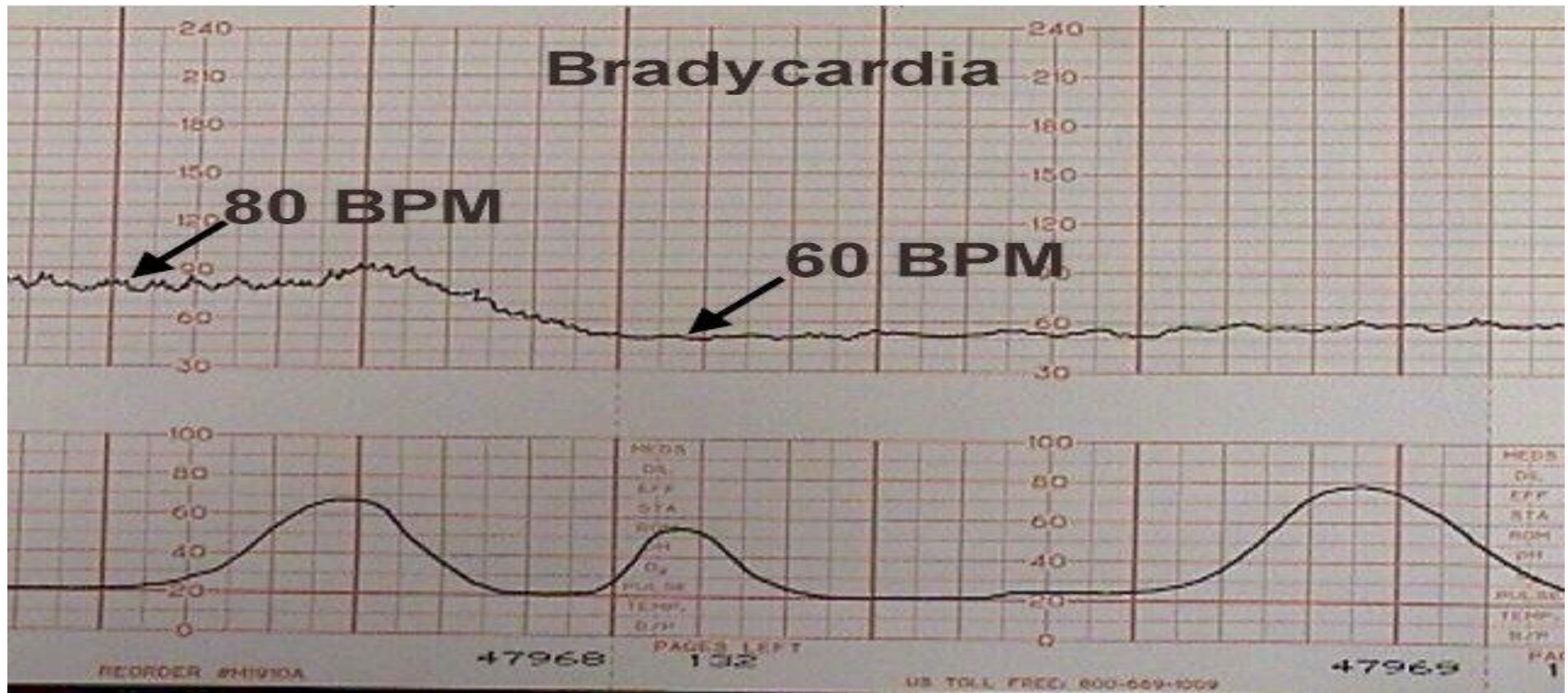
Fetal Tachycardia



Fetal Tachycardia

- **Causes of fetal tachycardia include:**
 - **Maternal pyrexia (infection, chorioamnionitis)**
 - **Fetal hypoxia.**
 - **Medications (beta-agonist (Ritodrine (Yutopar)Terbutaline (Bricanyl) (drugs used for tocolysis) (Atropine) (Sympathomimetic drugs) (Parasympatholytic drugs)**
 - **Fetal arrhythmias (SVT).**
 - **Fetal or maternal anemia.**
 - **Fetal hypoxia**
 - **Hyperthyroidism**
 - **Prematurity**

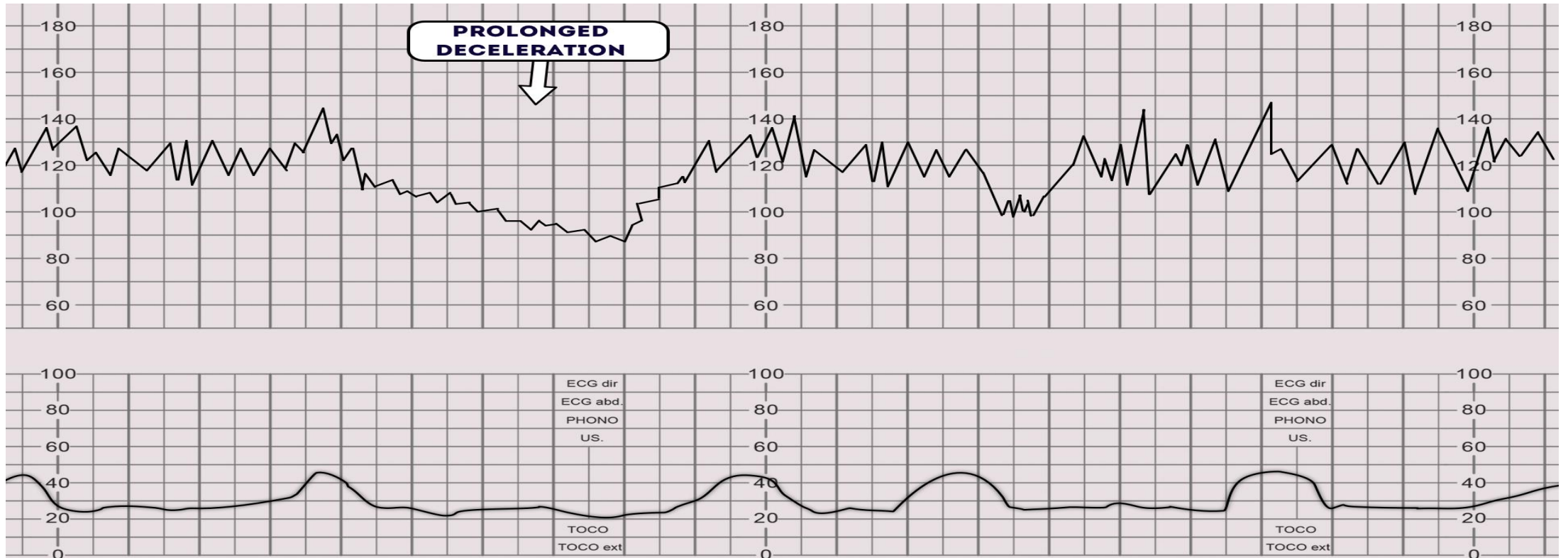
Fetal Bradycardia



•Prolonged deceleration:

If it lasts **between 2-3 minutes** it is classed as **non-reassuring**.

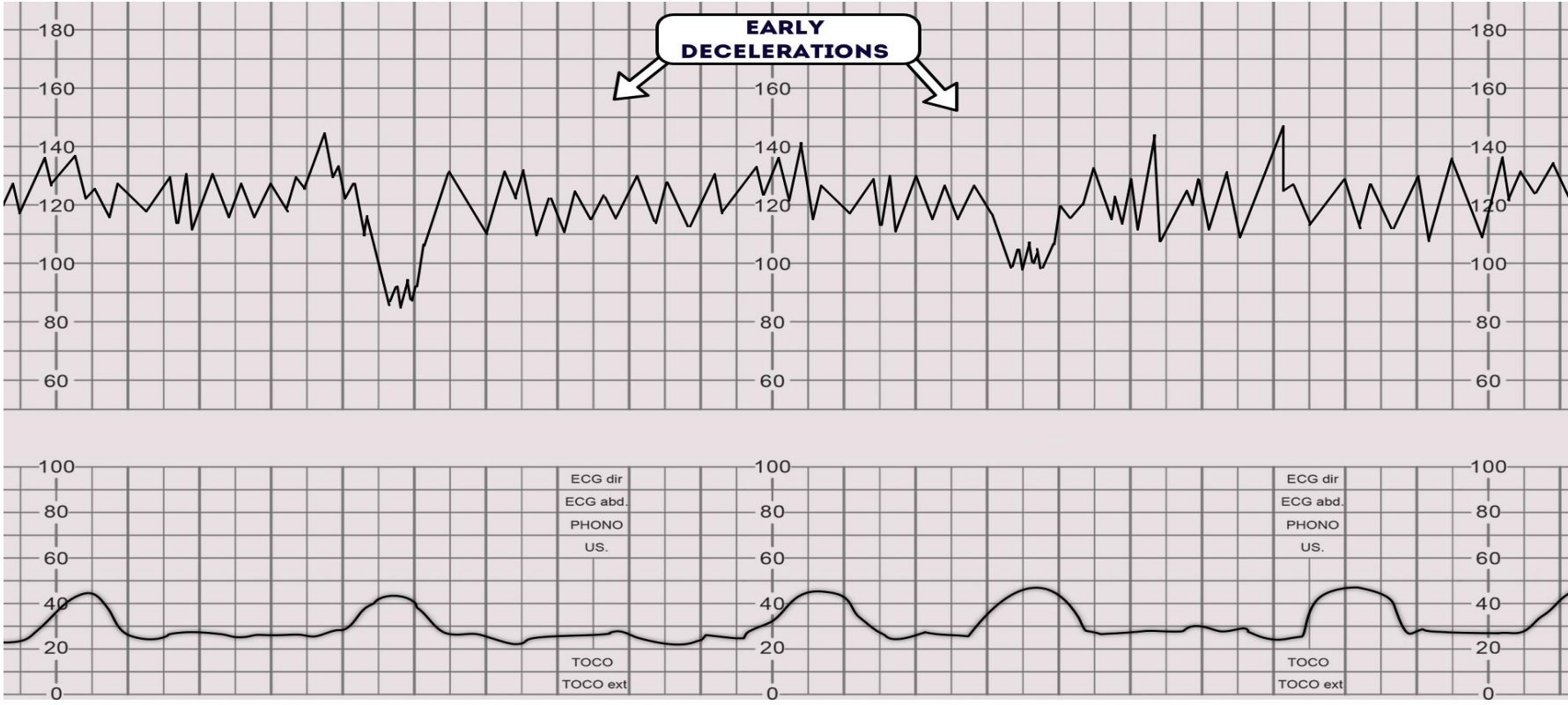
If it lasts **longer than 3 minutes** it is immediately classed as **abnormal**.



Causes of prolonged decelerations

- Severe bradycardia: FHR less than 80 beats per minute, lasting longer than 3 minutes is an ominous finding and may be associated with fetal acidosis.
- **Possible causes:**
- Prolonged cord compression
- Cord prolapse
- Tetanic uterine contractions
- Supine hypotension
- Paracervical block
- Epidural and spinal anesthesia
- Maternal seizures
- Rapid fetal descent
- Vigorous vaginal examination may cause strong vagal response
- If associated with vaginal bleeding we have to think of: Major abruptio placenta, rupture uterus and vasa previa

Early deceleration is considered to be physiological and not pathological

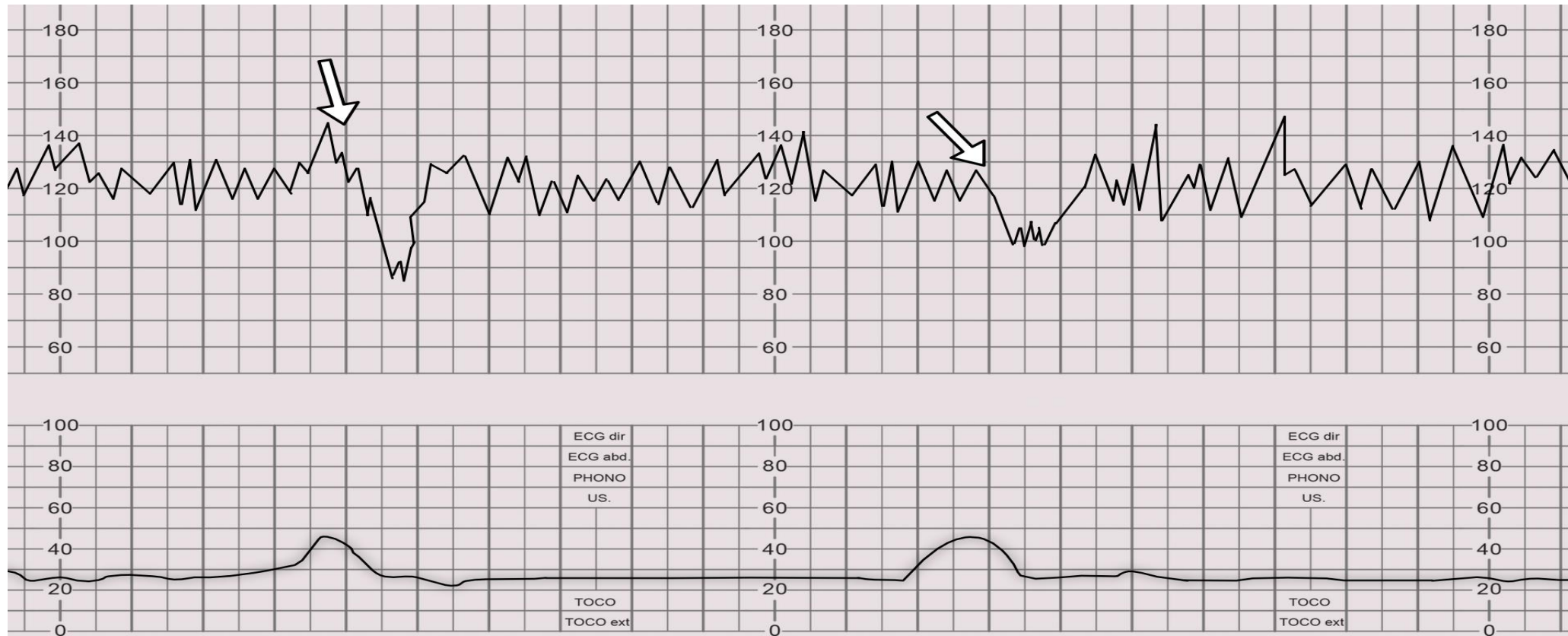


Late deceleration caused by reduced uteroplacental blood flow due to:

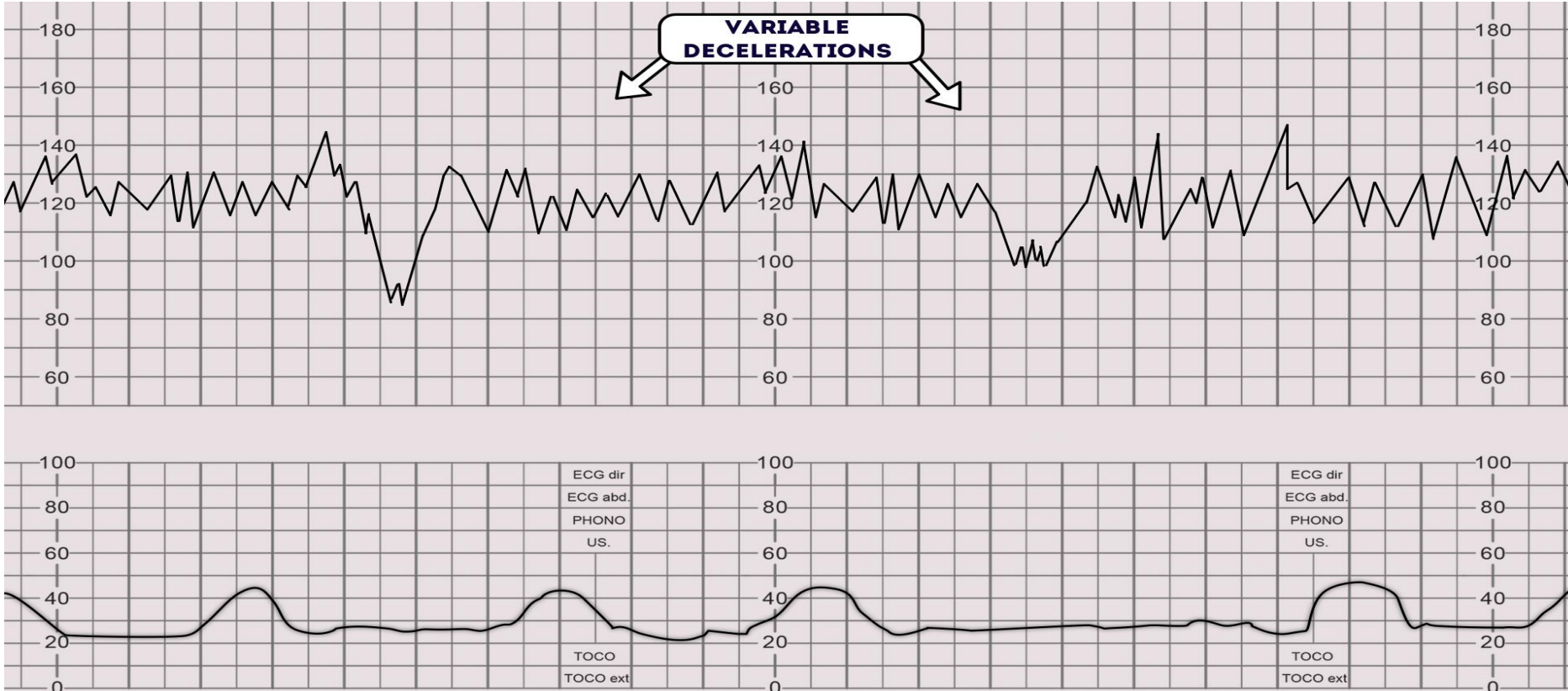
Maternal hypotension

HPT, Pre-eclampsia

Uterine hyperstimulation



Variable decelerations are usually caused by umbilical cord compression



Variable Decelerations

- **The accelerations before and after a variable deceleration are known as the shoulders of deceleration.**
- Their presence indicates the fetus is not yet hypoxic and is adapting to the reduced blood flow.
- The presence of persistent variable decelerations indicates the need for close monitoring.
- Variable decelerations without the shoulders are more worrying, as it suggests the fetus is becoming hypoxic

A sinusoidal pattern usually indicates one or more of the following:

Severe fetal hypoxia

Severe fetal anaemia (Rh disease)

Fetal/maternal haemorrhage

