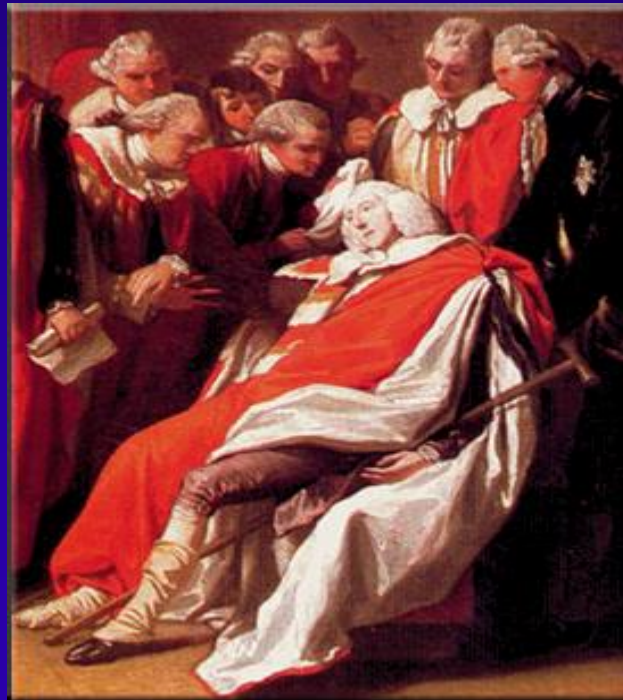


SYNCOPE

Křivan L.,
IKK FN Brno - Bohunice



Syncope

- **Transient loss of consciousness connected with a postural tone decrease, caused by reversible brain ischaemia. Patient gets conscious again without any electric, or pharmacological intervention.**

Syncope x Collaps

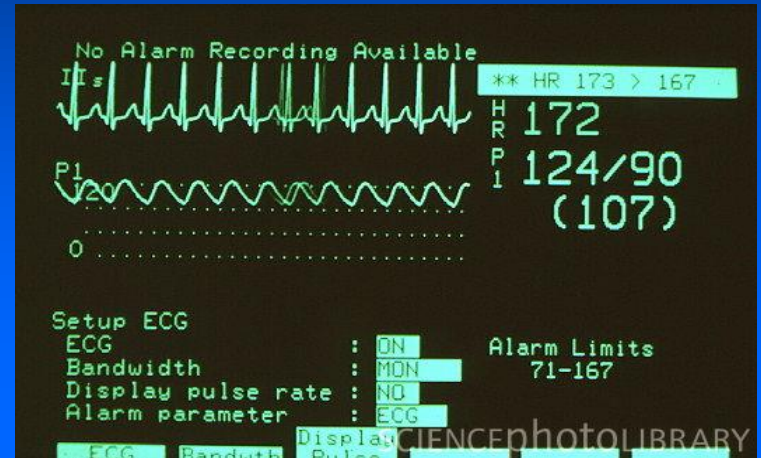
- **Syncope** – loss of consciousness is due to brain hypoperfusion



- **Collapses**
 - without unconsciousness (psychogenic, cataplexia, TIA)
 - with unconsciousness (hypoglycaemia, hypoxia, hyperventilation, seizures, intoxication)

Hospital admissions due to syncope

- 1 - 6% - all hospitalizations
- 3% - hosp. in the ICU
- 50% - out hospital diagnosis
- 92% - syncope
- 6% - non syncopal collapses
- 2% - syncope of unknown etiology



Etiology of the syncope

- **Reflex (neurovegetative) 71%**
- **Ortostatic hypotension 11%**
- **Cardiac arrhythmias 12%**
- **Structural heart disease 5%**
- **Cerebrovascular 1%**

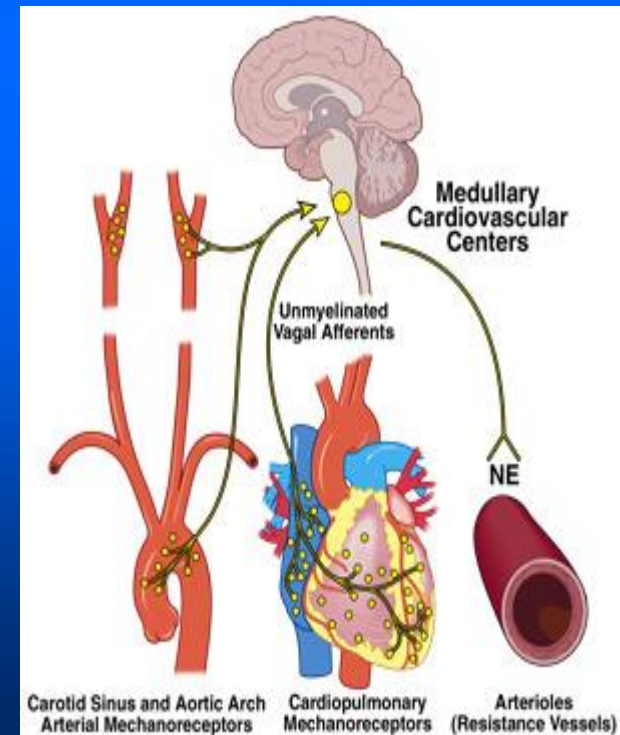
Reflex - neurovegetative

- Vasovagal
- Hypersensitive carotic sinus
- Cough, micturial, defecation, pain, brass instruments, weight lifting ...)



Mechanism of VVS

- pooling of the blood in LE and GIT
- decreased blood return to the RV - volumoreceptors
- sympathetic activation + hypercontraction
- mechanoreceptor irritation
- afferentation n.IX, X, C sympathetic fibres
- centre of the reflex NTS
- efferentation - vasodilatation, bradycardia



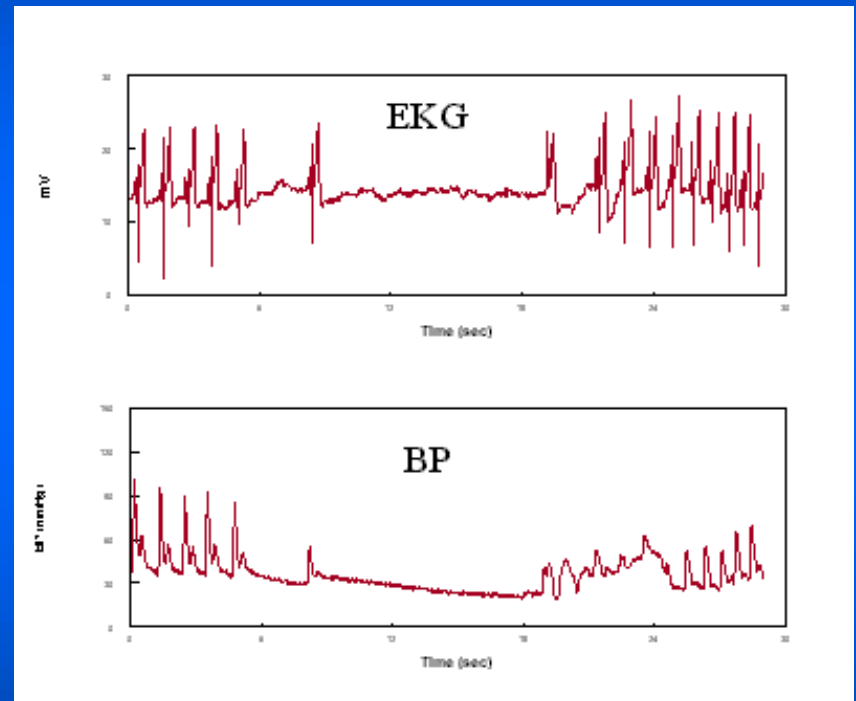
VVS

- asthenic patients
- increased dermografismus
- standing, sitting
- long standing in crowded places



Clasification VVS

- **Type I** - mixed
- **Type II** - cardioinhibitory
- **Type III** - vasodepresoric



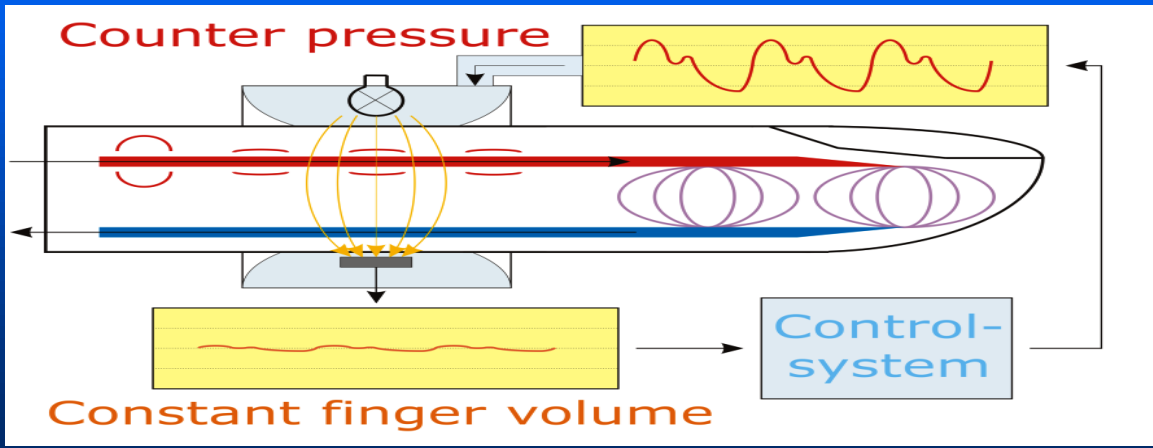
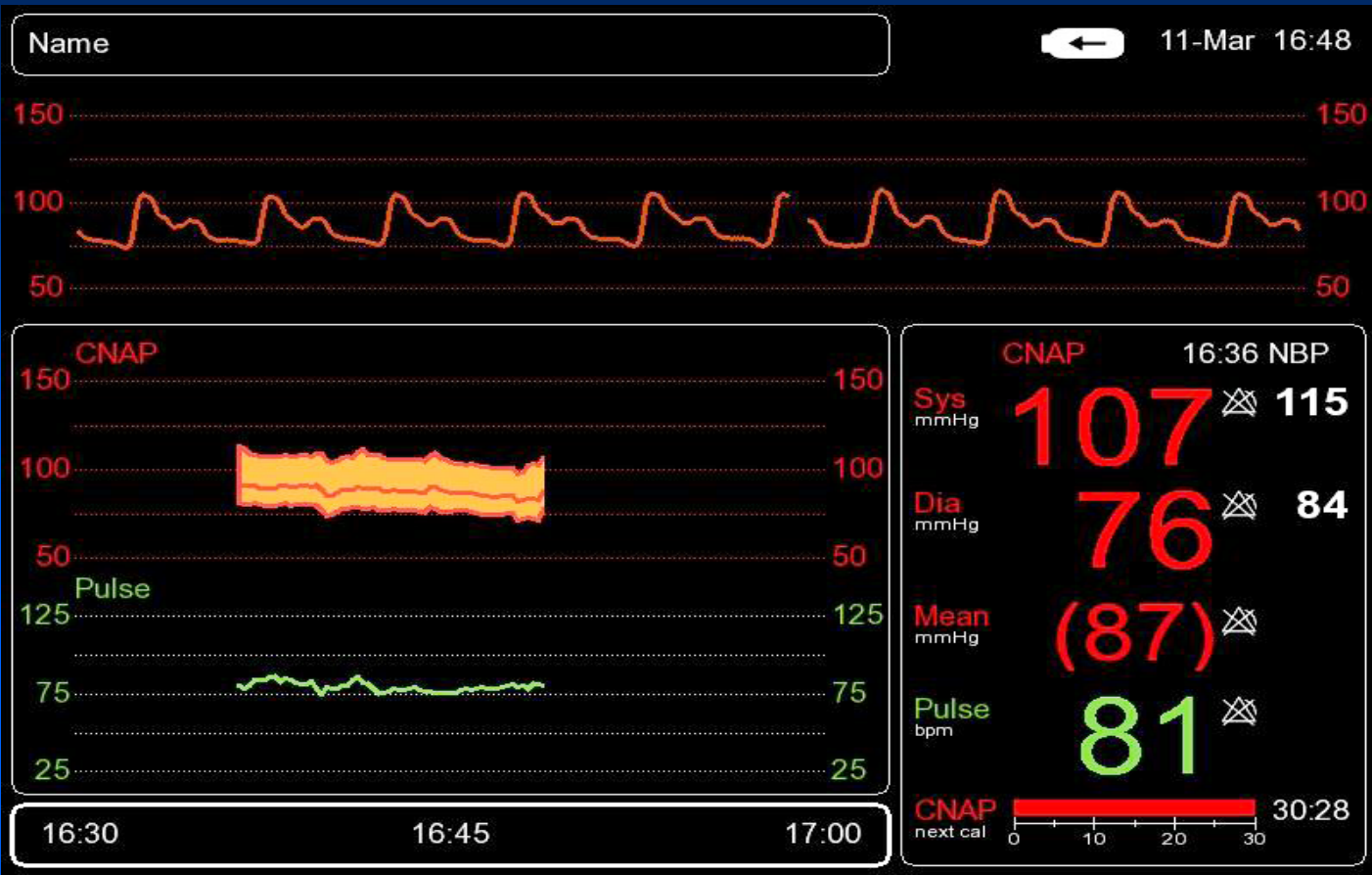
Head upright tilt test - HUT

- **passive phase** - 40 min ortostasis (60st.)
- **farmacologic provocation**
- - 5 min horiz. position -
isoproterenol (3microg/kg/min)
- - nitroglycerin (1/2 - 1 tbl.)
- - 20 min active ortostatic position

NIBPM







Therapy of the VVS

- regimen recommendation !!!
- beta I selective BB
- teophyllin
- verapamil
- disopyramid
- scopolamin
- cardiac pacing DDI



Orthostatic hypotension

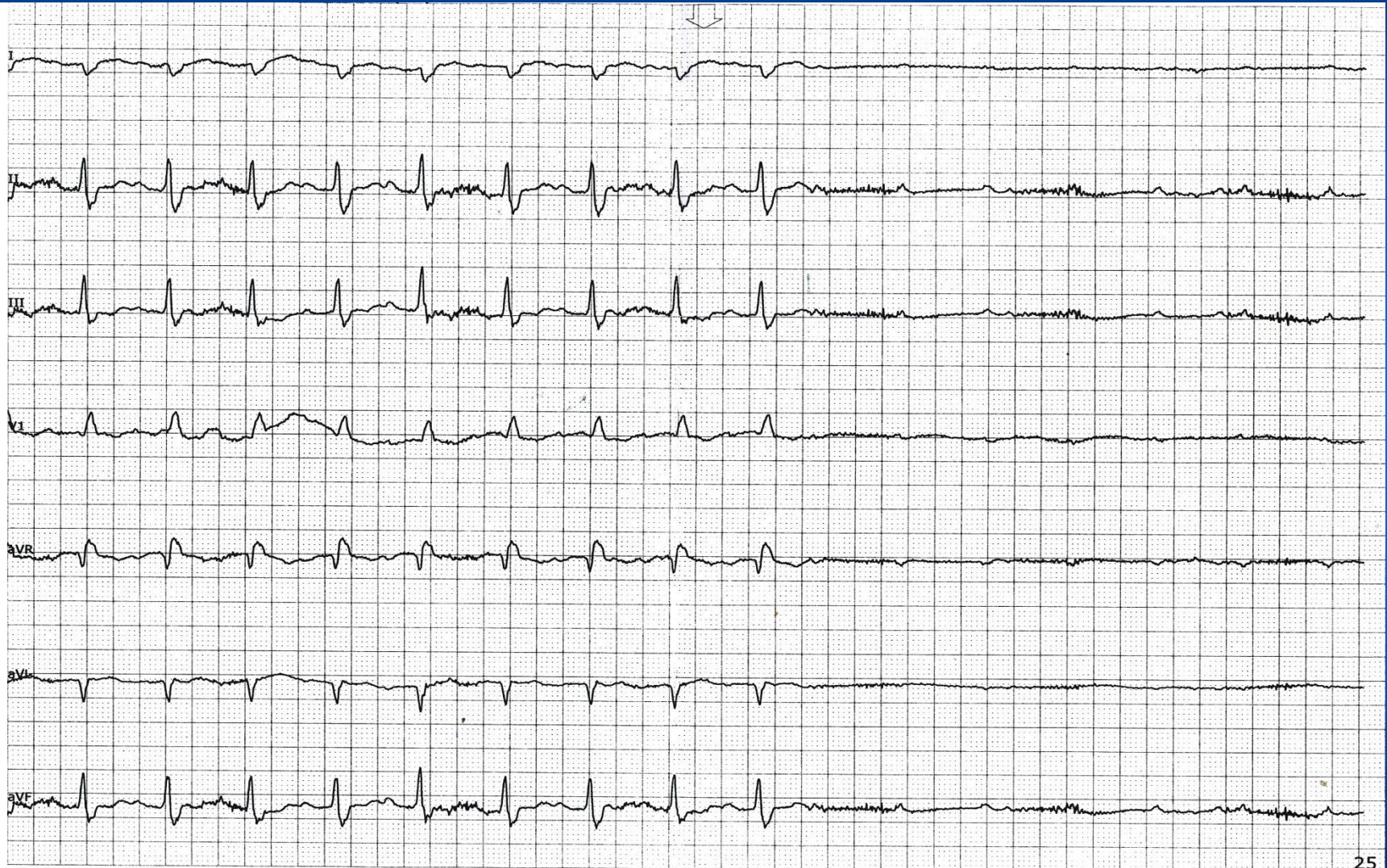
- **Sympathetic dysfunction**
 - **Primary: Shy-Drager, Parkinson, atrofie**
 - **Secondary: DM, amyloidosis**
 - **Postexercise**
 - **Postprandial**
- **Drug and alcohol induced**
- **Volume depletion (hemorrhagia, diarrhea)**

Cardiac arrhythmias

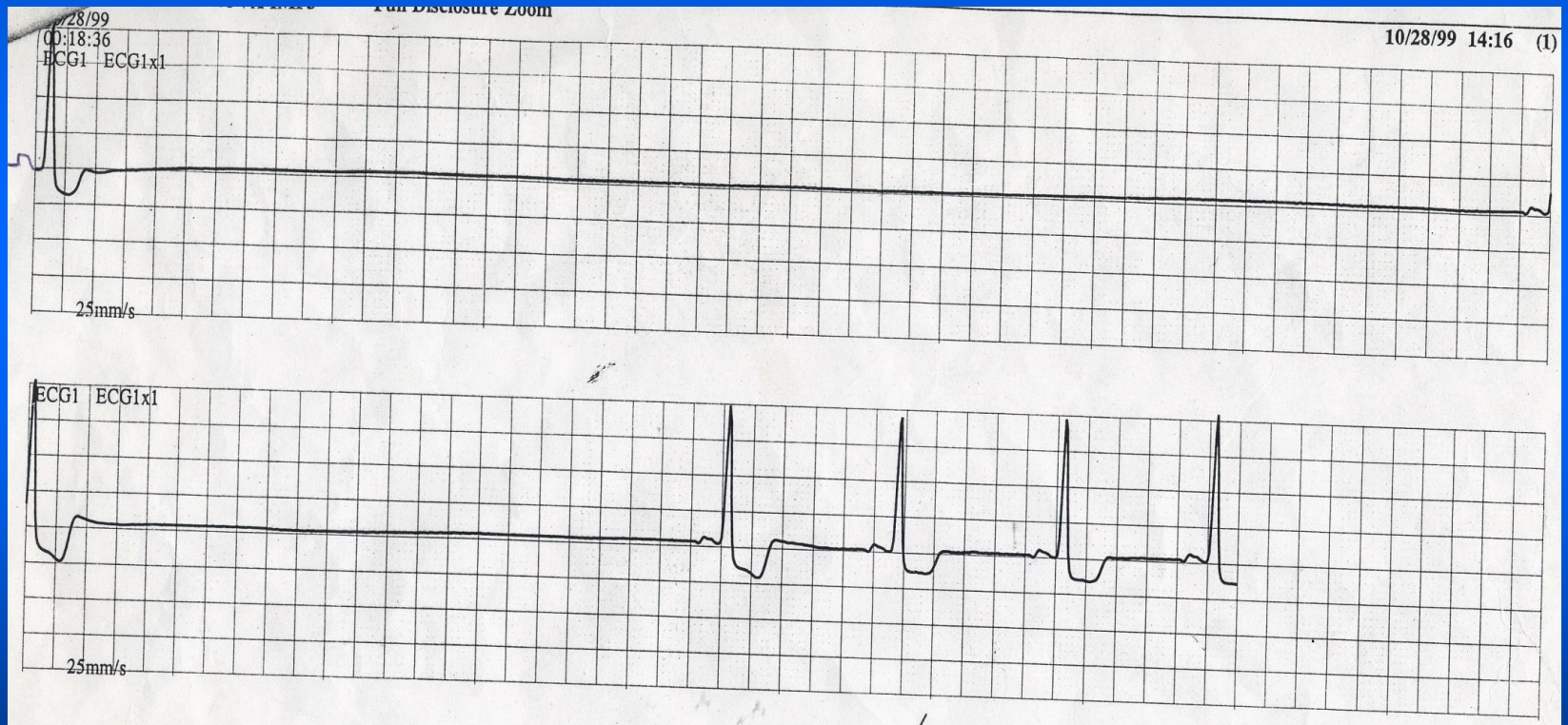
- SA node (SSSy)
- AV node (AVB II.-III.st)
- Supraventricular, ventricular tachycardias
- Genentic channel disorders (LQT, Brugada)
- Dysfunction PM, ICD
- Proarrhythmia



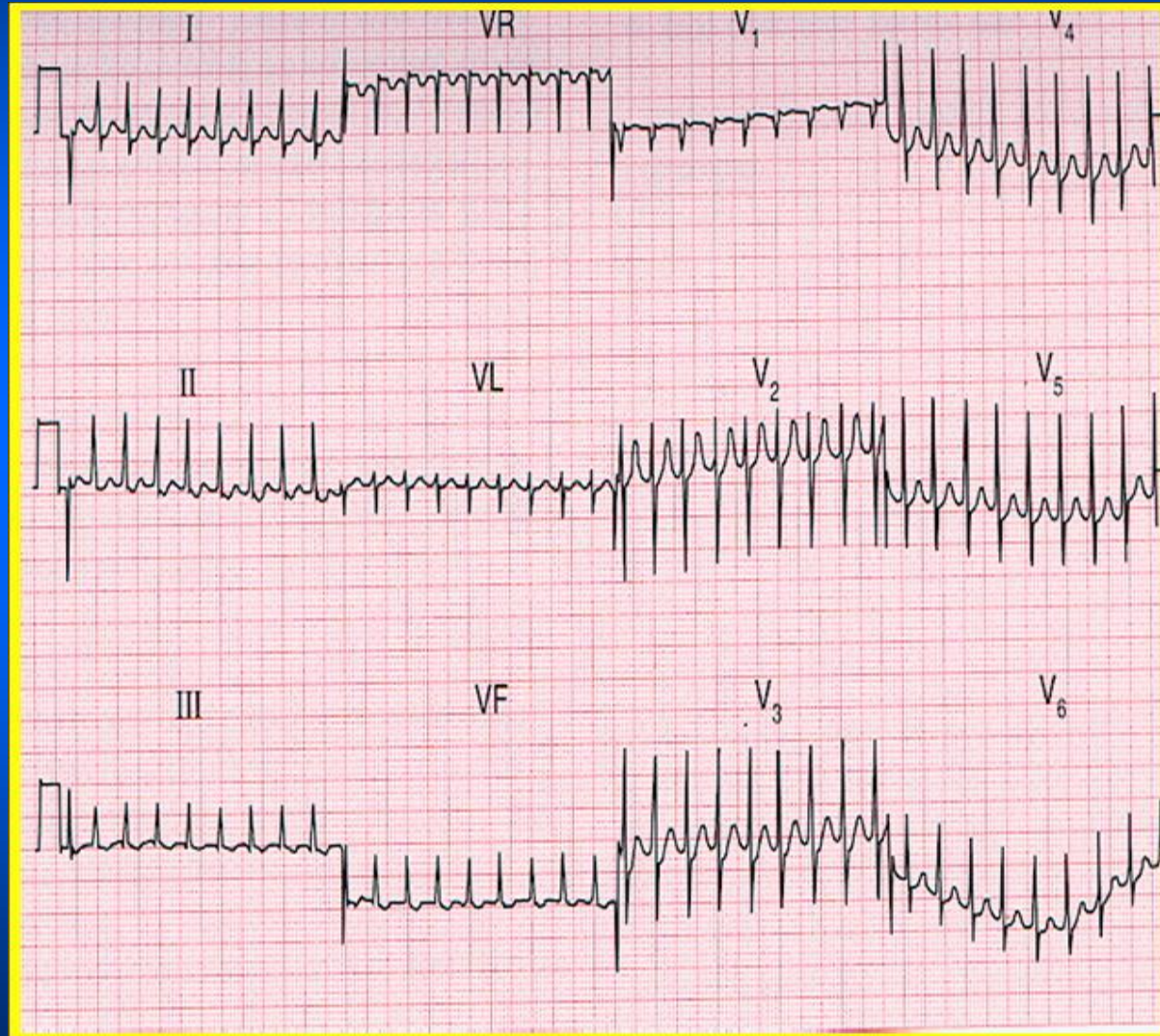
Bradycardia



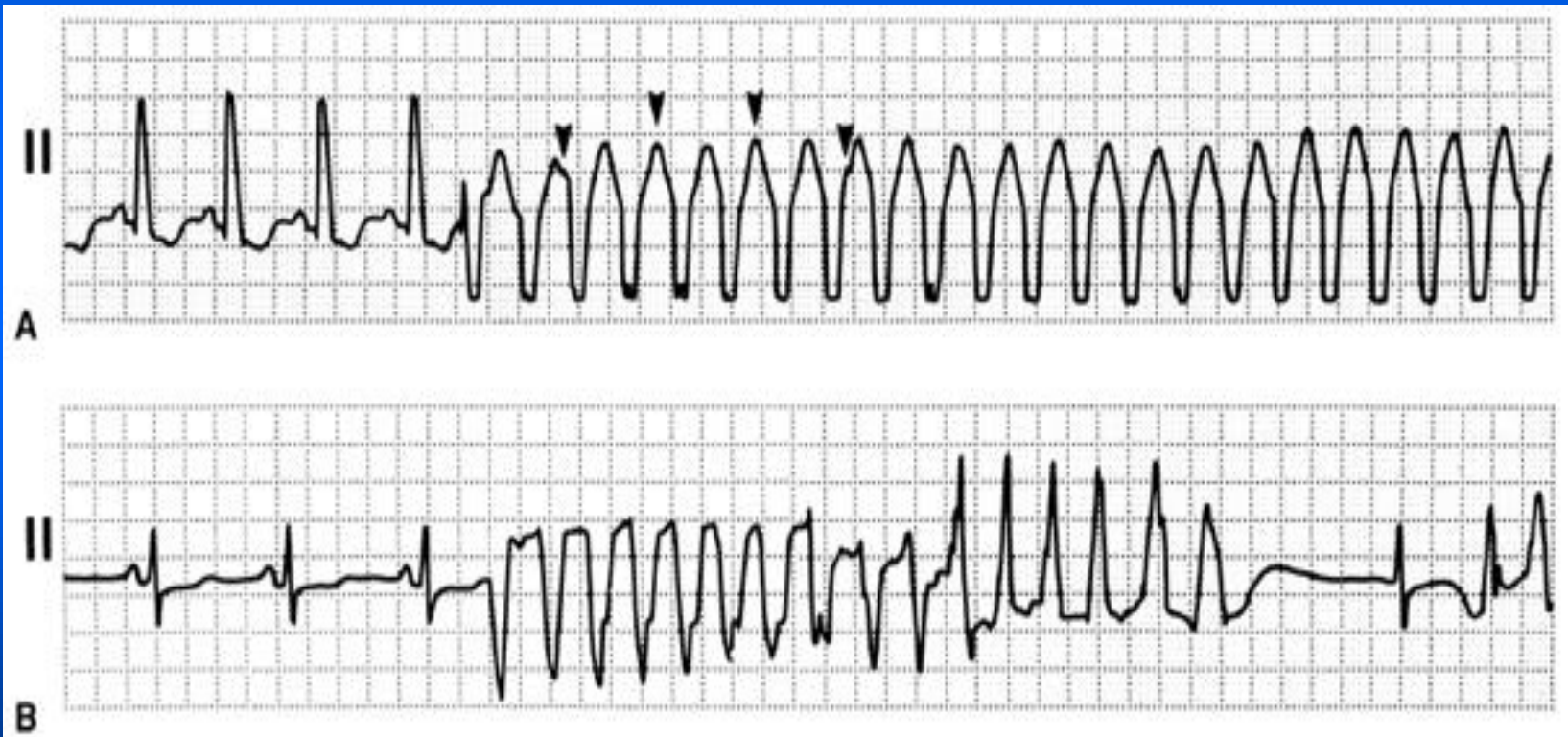
Bradycardia



SVT



NSVT



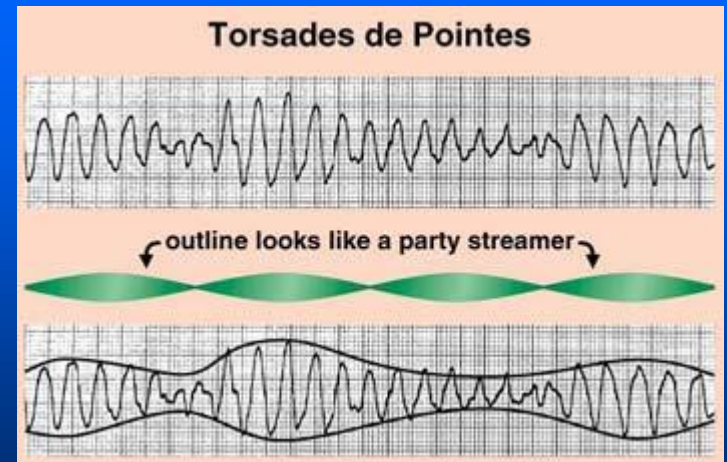
TdP - torsade de pointes

Saveurs d'Autrefois

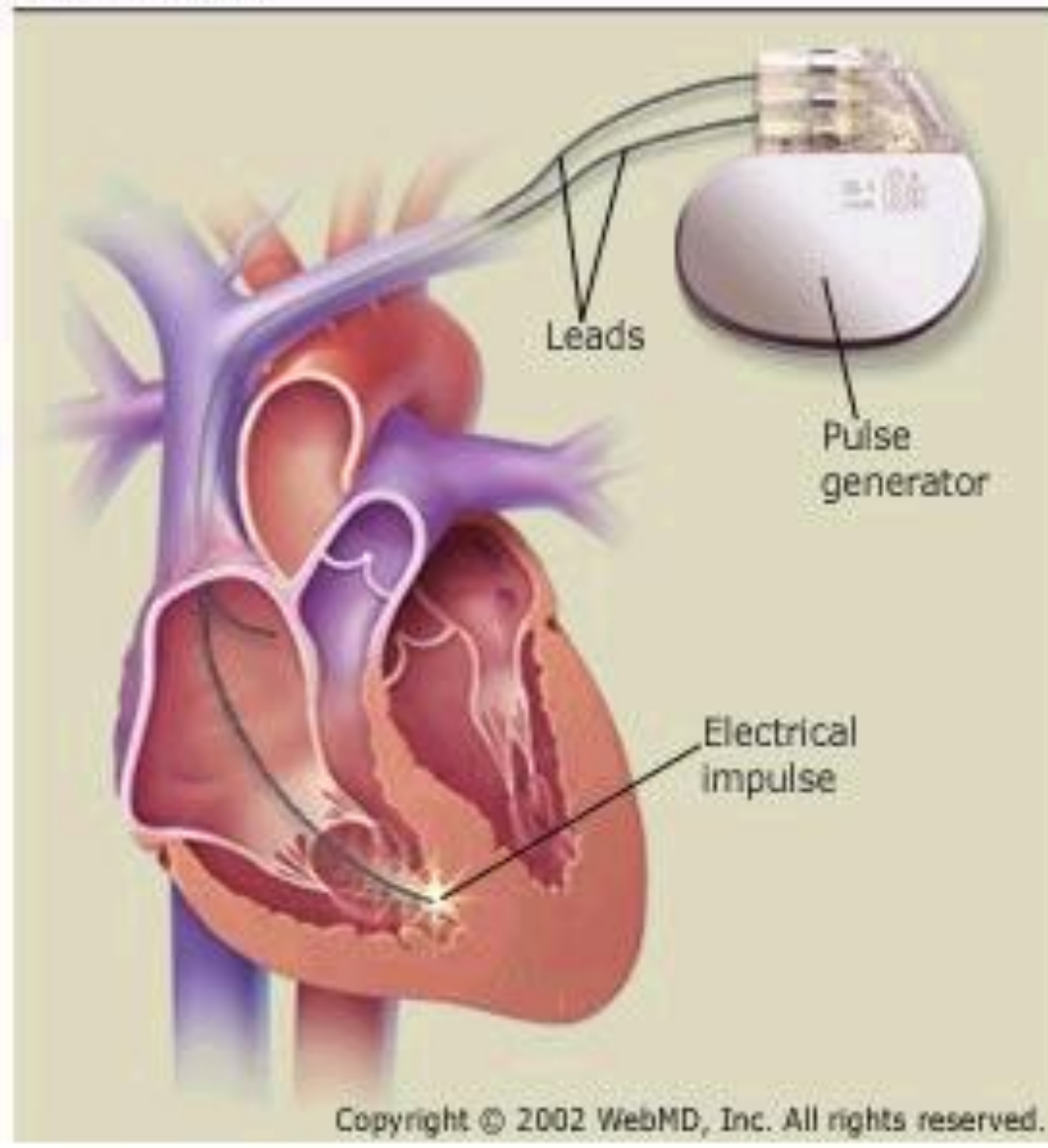
Artisan *Spécialité* Boulanger

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Boulangerie-Pâtisserie • 9, rue d'Italie • Nice • Tél. 04 93 88 57 89
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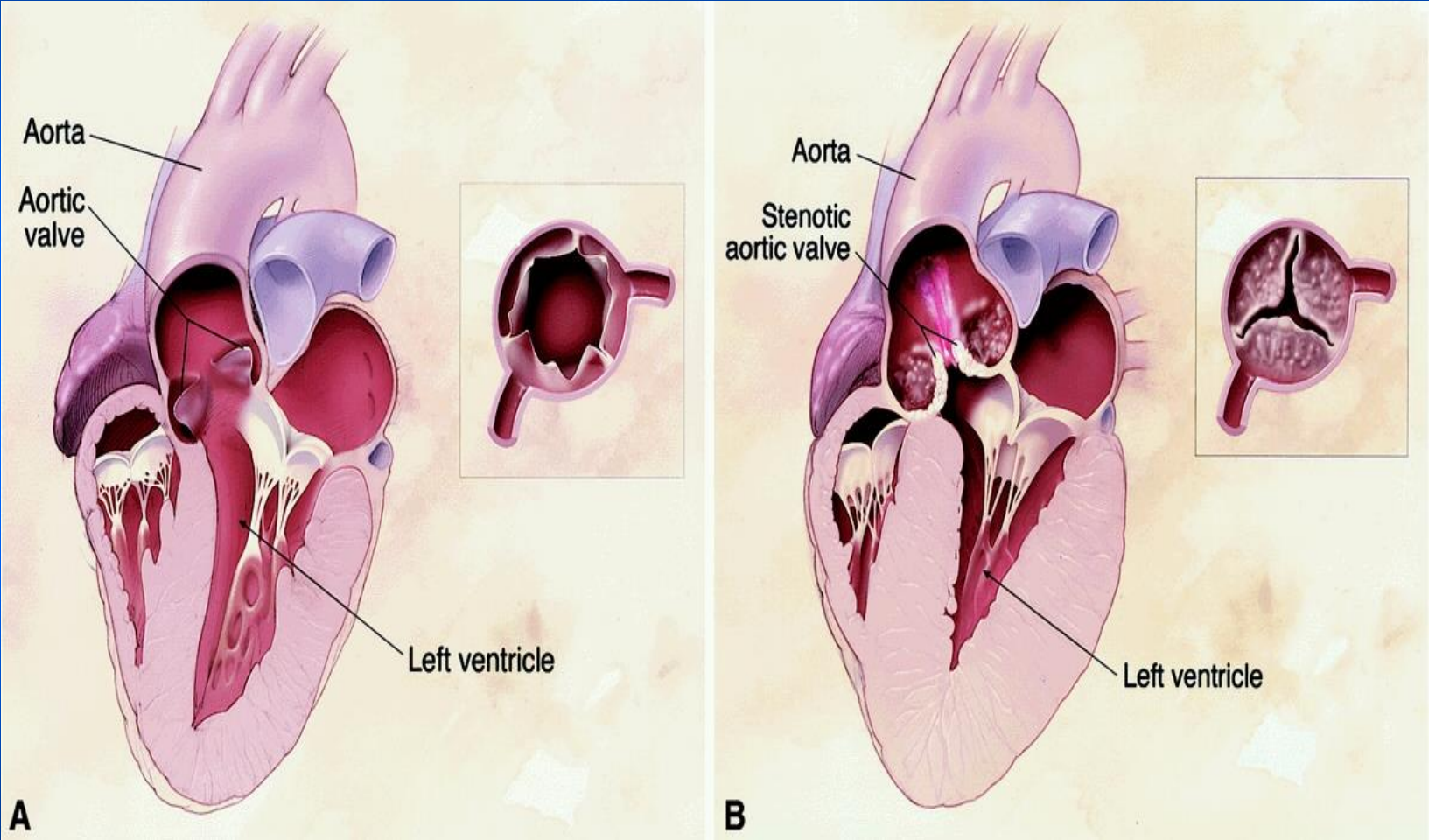
Pacemaker



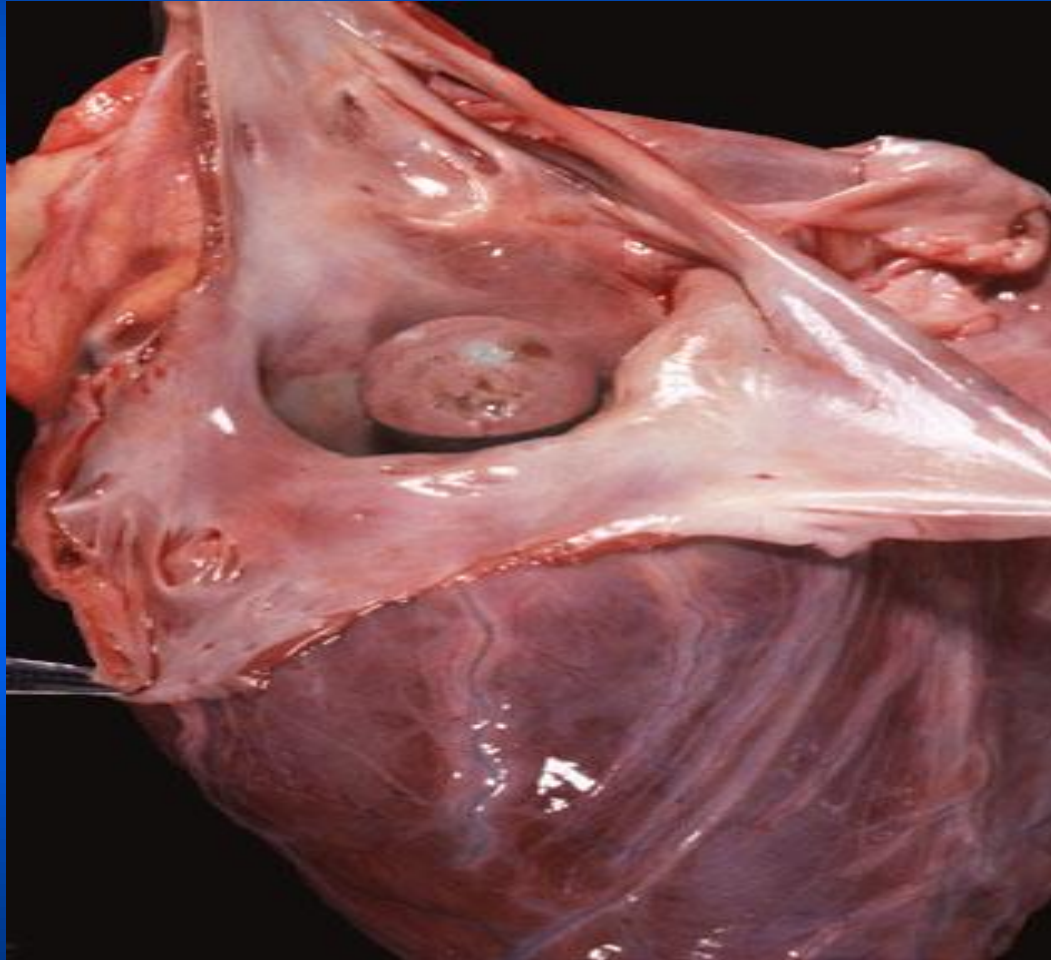
Structural heart disease

- Valvular disease
- HOCMP
- Atrial myxoma
- *Accute aortic dissection*
- *Pericardial tamponade*
- *Pulmonary embolism*

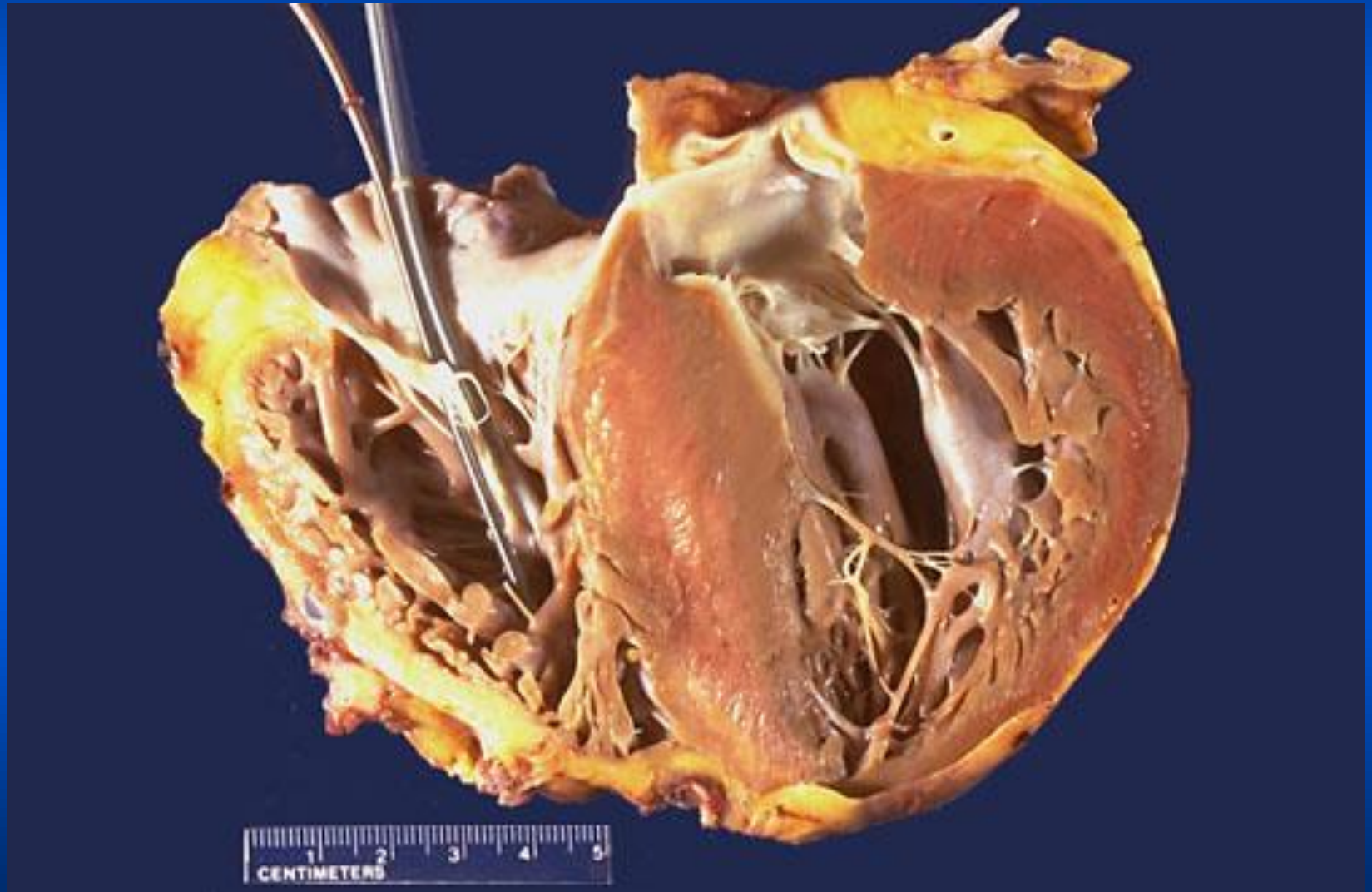
Ao stenosis



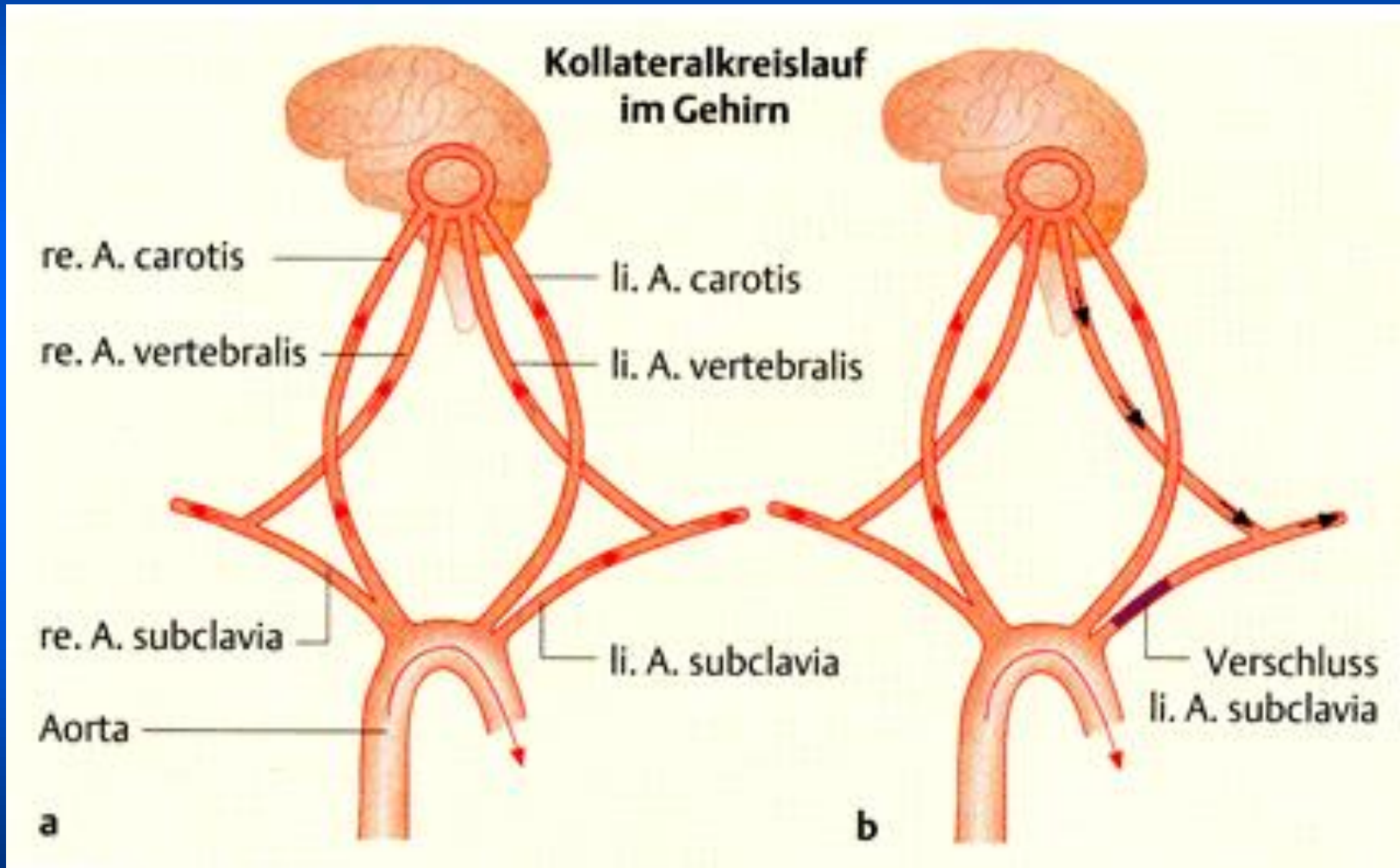
Myxoma



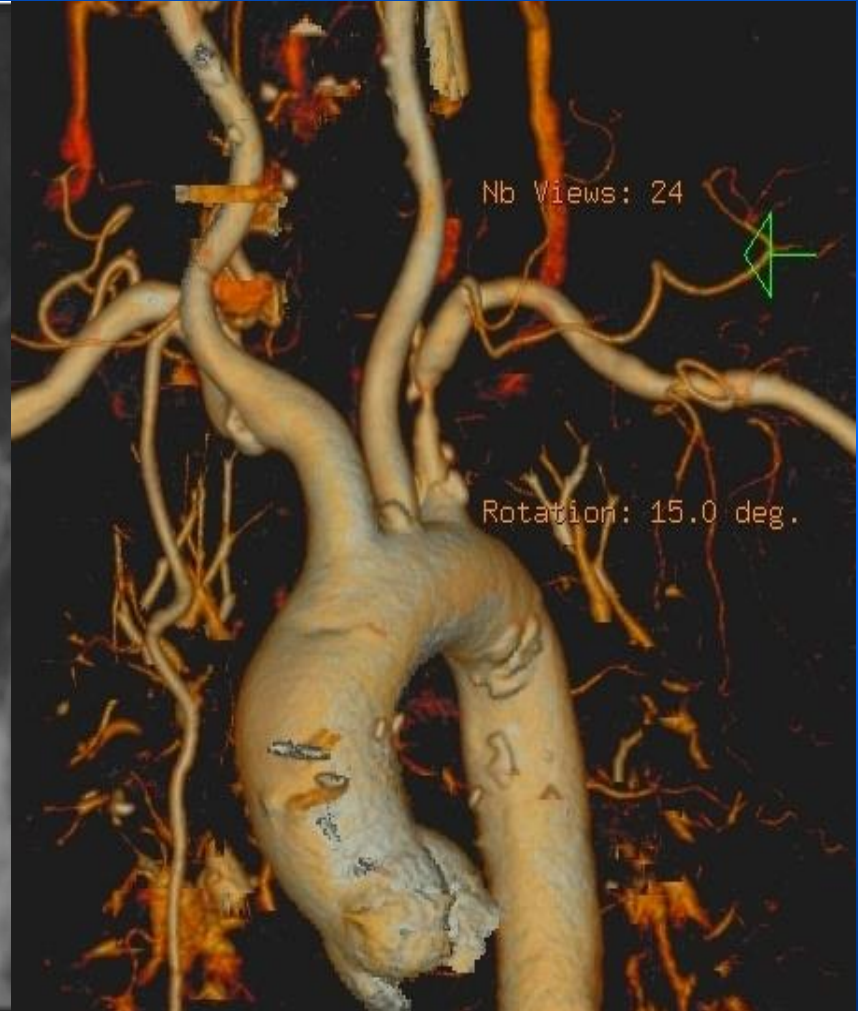
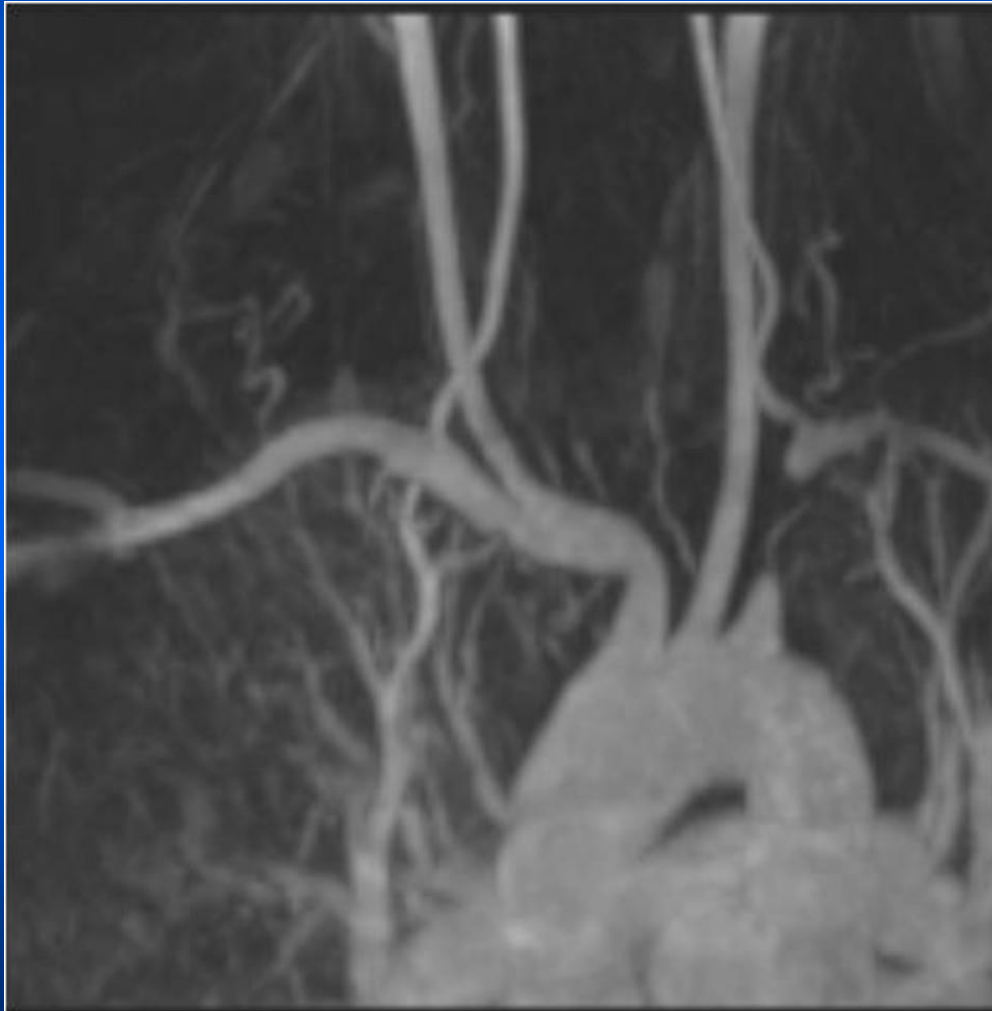
HOCMP



Cerebrovascular – steal phenomenon



Cerebrovascular – steal phenomenon



Investigation of syncope

- **History + physical examination**
- **ECG, OT test, Carrotic sinus massage, Holter, ECHO, EEG, US carotic art.**
- **HUT test, EP study, prolonged monitoring, psychiatric examination**
- **Single syncope of unknown etiology:
Stop further investigation in the right time and inform patient**

Recurrent syncope of unknown etiology

- Indication for an ILR (Implantable Loop Recorder) implantation

