A case that changed my practice

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38 years old, female patient

- Since 3 hours severe headache, nausea; self medication with ibuprofen did not help
- Known migraine since childhood
- Since approx. 6 months recurrent attacks of tachycardia
- CV risk factors: Ex-Smoker (20py)
- No further diseases known, no regular medication
Status on admission

Female, normal weight

Cardiopulmonary status

- HR: 64/min, RR: 153/80 mmHg
- RR normal
- Normal heart sounds, no murmurs
- Pulmo normal

General status

- Sweating; no further pathological findings
Monitoring

- Paroxysmal supraventricular tachykardia (suspected AVNRT, 160bpm), spontaneous conversion into sinus rhythm

  - RR max. 176/117 mmHg

  - SO2 99%

  - Need to do 12-channel ECG

  - Need to do basic lab.
Laboratory findings

Troponin I: 0.3 µg/l → 3.5 µg/l ca. 1 h later

CK: 209 U/l → 294 IU/l

CK-MB: 12 U/l → 17 IU/l

WBC: 15.3 G/l

Platelets: 436 G/l

AST: 34 U/l

Suspected dx.: NSTEMI with arrhythmias
ECG II
cia. 3 h later
Transport to Charité by MICU

- Medication:
  - 7.5 mg Metoprolol i.v. 47.5 mg p.o.
  - 500 mg ASS i.v.
  - 5000 IE Heparin i.v.
  - 10 mg Diazepam i.v.
  - 2x 12.5 mg Dolasetron i.v.
  - 1 Amp. Ranitidin i.v.
  - Tirofiban-Perfusor
Status Charité

- Severe Dyspnoe despite 15 l O2/min
- Acute heart failure (NTproBNP 9414 pg/ml)
- Pulmonary edema (see chest X-ray on the right)
- Mandatory ventilation, transfer to cardiac cathether (suspected NSTEMI)
Cardiac Catheter Diagnostic

- No CAD
- LVEDP 31 mmHg
- LVEF 20 %
- Midventricular Akinesia only apical normal pump function
- PAP 30/24/28 mmHg
- Patient unstable
ICU

- Intubation /mandatory ventilation
- CCT: no pathologies
- Hypotension, sinus tachycardia (max. 150 bpm)
  - 2 episodes with chest compressions (no pulses)
  - Catecholamines: Noradrenalin/Dobutamin
  - Hemodynamics: CO 2.5 l/min (CI 1.5), SVR 2000!
- Hyperglycemia (peak 364 mg/dl)
- Fever 39.5 °C
- Blood:
  CRP 9.7 mg/dl, Leukozyten 16.2 /nl, (Diff.BB Linksverschiebung),
  TPZ-INR 65%, Albumin 2.4 g/dl, Troponin T 2.3 μg/l, CK 634 IU/l,
  CK-MB 59 IU/l, Lactate 83 mg/dl
Differential Diagnosis

Need for further „biomarkers“ (imaging)

- Pulmonary embolism
  - low probability, does not explain wall motion abnormalities (WMA) (PAP 30/24/28 mmHg)
- Septic cardiomyopathy
  - Cultures negative
- Toxic Cardiomyopathy
  - Drug screening negative
- Tako-Tsubo-Cardiomyopathy
  - No typical history
  - No typical WMA
- Myocarditis (virus serology negative)
Echo (day 9)

- LVEF ca. 45%
- Regional wall motion abnormalities normalizing
- Slight pericardial effusion in front of RV und RA
MRI-acute

- T2: Edema
- T1: delayed enhancement posterolateral and septal (fibrosis, scar?)
MRI-follow up

No significant edema (T2, left panel), nor fibrosis or scar (right panel)
CT Thorax/abdomen

CT-Abdomen/Thorax
Tumor: 3.6 cm
Differentialdiagnosis 2

- Tumor near left kidney
- Re-assessment of clinical presentation:
  - Headache
  - Sweating
  - Tremor
  - Supraventricular tachykardia
  - Hypertension

Phäochromozytom?
Suspicion of Phäochromocytoma

- 24-h urine samples:
  - Adrenaline 981 nmol/d (N: 109 nmol/d)
  - Noradrenaline 2608 nmol/d (N: 620 nmol/d)
  - VMS 104 μmol/d (N: 33 μmol/d)
  - Dopamine in normal range
MIBG-scintigraphy

- Left adrenal gland MIBG-pos.
Follow Up

- Laparoscopic surgery of left pararenal gland after complete recovery one month later

- Pathology:
  - Phäochromocytoma with small proliferative fraction
What did this case change?

• See the whole picture, value all available information
• Awareness to see the unexpected
• Never believe, confirm
Thank you!

http://notfallmedizin.charite.de