

ESIM Winter School 2015

# **Clinical Case presentation**

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Estonia

# A 58-year-old male

- Past medical history: obesity, hypertension, permanent AF, gout, dyslipidemia, gastritis, erectile dysfunction
- 1999 ascending aortic aneurysm and dissection - operated (mechanical aortic valve + graft)
- Medications: warfarin 15 mg x 1, rosuvastatin 10 mg x 1, pantoprazole 40 mg x 1, nebivolol 5 mg x 1, enalapril 20 mg x 1, hydrochlorothiazide 12,5 mg x 1, amlodipine 5 mg x 1, allopurinol 300 mg x 1, sildenafil if needed

# At the end of May 2014

- A week of headache, followed by generalized tonic-clonic seizure
- Brought by ambulance to a local hospital
- CT scan suspicious for right occipital-parietal tumor
- No tumor on MRI scan
- Diagnosis of generalized idiopathic epilepsy, treatment with carbamazepine 200 mg x 3 (8 weeks)

Alcohol history: last binge drinking in January 2014, after that no more than a bottle of beer a day

# Central hospital department of internal medicine 23.07.14

## Complaints:

- Fatigue, perspiration
- 6 weeks of fevers 37,5-38,6°C
- Skin rash for 2 weeks
- Episode of low back pain
- Unable to empty the bladder
- RR 95/40 mmHg without treatment
- INR lately subtherapeutic

# Objective status

- No fever
- Maculopapular rash on arms, abdomen and shins
- Perspiration
- ECG: AF 90 bpm, RR 98/50 mmHg
- Otherwise normal

Endocarditis?

Lymphoma?

Autoimmune disease?

# Work-up

WBC	16,27	(4,5-10,4 E9/l)
LYMH	5,10	(1,0-3,5 E9/l)
EO	3,91	(0,01-0,4 E9/l)
LYMH%	31,3	(15,0-45,0%)
EO%	24	(<6%)
Blood smear	- atypical lymphocytes	
CRP	48	(<5 mg/l)
LDH	549	(135-225 U/l)
UA	740	(<417 mcmol/l)
ALT	60	(<41 U/l)
AST	51	(<40 U/l)
ALP	331	(40-130 U/l)
GGT	816	(<60 U/l)
INR	2,3	

- Cardiac echo - EF 55-60%, LA 33,2 cm<sup>2</sup>, valvular function normal, no vegetations
- Full-body CT-scan - renal accessory arteries, osteochondritis
- Gastroscopy - erosive gastritis
- USG - residual urine 11 ml

Thoughts?



# Diagnosis 24.07.14

Carbamazepine induced DRESS-syndrome (Drug Reaction with Eosinophilia and Systemic Symptoms)

- Atypical lymphocytosis
- Eosinophilia
- Skin rash
- Hepatitis
- Fever  $>38,5^{\circ}\text{C}$

Treatment: prednisolone 0,5 mg/kg p/o, tapered down in 6 weeks

# RegiSCAR criteria\*

**Table 1** Scoring System for Classifying DRESS Cases as Definite, Probable, Possible, or No Case, from Kardaun et al<sup>11</sup>

Score	-1	0	1	2
Fever $\geq 38.5^{\circ}\text{C}$	No/U	<u>Yes</u>		
Enlarged lymph nodes		<u>No/U</u>	Yes	
Eosinophilia		No/U		
Eosinophils			$0.7\text{-}1.499 \times 10^9 \text{ L}^{-1}$	<u><math>\geq 1.5 \times 10^9 \text{ L}^{-1}</math></u>
Eosinophils, if leukocytes $< 4.0 \times 10^9 \text{ L}^{-1}$			10%-19.9%	<u><math>\geq 20\%</math></u>
Atypical lymphocytes		No/U	<u>Yes</u>	
Skin involvement				
Skin rash extent (% body surface area)		<u>No/U</u>	$> 50\%$	
Skin rash suggesting DRESS	No	U	<u>Yes</u>	
Biopsy suggesting DRESS	No	Yes/U		
Organ involvement*				
Liver		No/U	<u>Yes</u>	
Kidney		No/U	Yes	
Muscle/heart		No/U	Yes	
Pancreas		No/U	Yes	
Other organ		No/U	Yes	
Resolution $\geq 15$ days	<u>No/U</u>	Yes		
Evaluation of other potential causes				
Antinuclear antibody				
Blood culture				
Serology for HAV/HBV/HCV				
Chlamydia/mycoplasma				
If none positive and $\geq 3$ of above negative			<u>Yes</u>	

**Score 5 -  
probable case  
of DRESS!**

DRESS = Drug Reaction with Eosinophilia and Systemic Symptom; U = unknown/unclassifiable; HAV = hepatitis A virus; HBV = hepatitis B virus; HCV = hepatitis C virus.

\*After exclusion of other explanations: 1, one organ; 2, two or more organs. Final score  $< 2$ , no case; final score 2-3; possible case; final score 4-5, probable case; final score  $> 5$ , definite case.

# Take home message!

- DRESS is rare adverse drug reaction
- $\frac{1}{3}$  of the cases are related to anticonvulsants, in addition to sulfonamides and allopurinol
- 10-20% mortality
- Latency period 3 weeks to 3 months
- Symptoms may persist or worsen after stopping the offending drug

**THANK YOU!**