Good morning pharmacists!

Case nr 1

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Disclosure statement

Conflict of interest: nothing to disclose

47 years old man

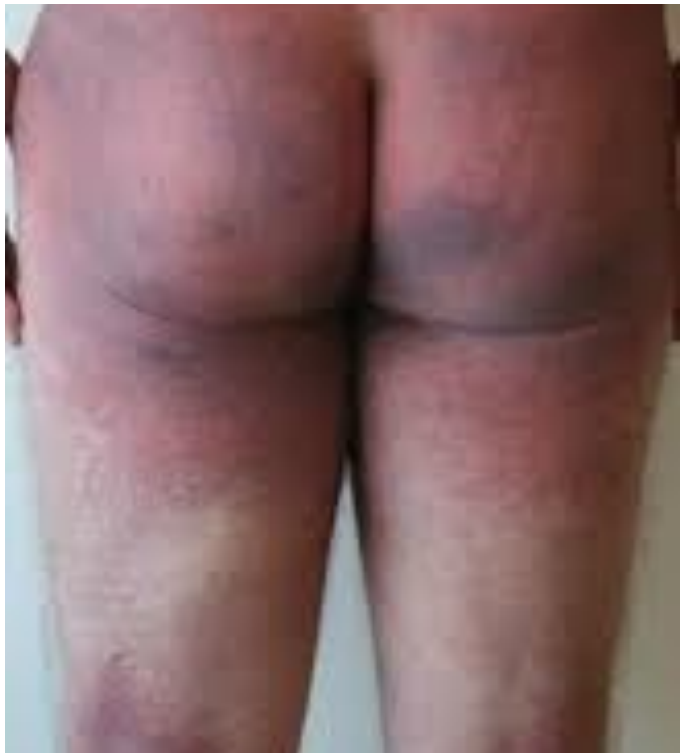
- 21.01.2021. hospitalised to the department of pulmonology
- Reason - planned operation
- Weight 100kg
- BMI – 29.2 kg/m^2

- Medication at home – tab. perindopril 5mg od

At the day of admission

- Hepatic metastases (MTS right lung in area S10)
- Condition after laparotomy, Liver S3 and S4 wedge resection (17.09.2020.)
- Rectal adenocarcinoma pT3N0M0G2R0, stage II A (17.05.2018.)
- Primary arterial hypertension, stage I

From the anamnesys



Severe allergic reaction after receiving penicillin at age 32 (angioedema combined with SDRIFE) - massive rash all over the body 3 - 4 months, 3 times the skin has passed, prednisolone has been used for 3 - 4 months

SDRIFE - symmetrical drug-related intertriginous and flexural exanthema -symmetrical erythematous rash on the gluteal and intertriginous areas observed after exposure to systemic drugs. Among the medications causing symmetrical drug-related intertriginous and flexural exanthema are beta-lactam antibiotics, especially amoxicillin, these agents are the most common triggers.

Day 1 - 4

Condition satisfactory, haemodynamically stable.

22.01.2021	23.01.2021	24.01.2021	25.01.2021
Empl. Fentanyl 25mcg	-	-	-
Sol. Trimeperidine (Promedol) 0-4 IM	Sol. Trimeperidine (Promedol) 0-4 IM	Sol. Trimeperidine (Promedol) 0-4 IM	Sol. Trimeperidine (Promedol) 0-4 IM
-	Tab. Paracetamol /Codeine 500/30 mg 2 tab.x 3	Tab. Paracetamol /Codeine 500/30 mg 2 tab.x 3	Tab. Paracetamol /Codeine 500/30 mg 2 tab.x 3

Day 5

Fever (39^0C)
Influenza A, B negative, Covid 19 - negative
CRP 198.96 (<5 mg/L)
WBC 11.4 (3.5-8.8 E9/L)
Creatinine 70 (45 .. 84 µmol/L)

Therapy of Sol. Ceftriaxone 2.0 x 1 iv q24h

Blood inoculation on anaerobic microflora in system BactALERT, material - blood
Smear of surgical material

Day 6

Patient's condition

- Fever (39^0C)
- CRP 226.69 (<5 mg/L)
- WBC 5.9 (3.5-8.8 E9/L)
- Eo, % - 0.8
- Creatinine 58 (45 .. 84 µmol/L)
- CT - suspected pneumonia

Consultation of infectologist and allergologist

Replacement of antimicrobials:

- Vancomycin 2g x 1 + Sol. NaCl 0.9% 250ml
- Sol. Meropenem 1g x 3 100ml

Blood inoculation on anaerobic microflora in system BactALERT, material – blood

Late in the evening – **allergic reaction** - redness on both hands, itching, slight swelling. No difficulty breathing. Temperature 37.5^0C, BP 140/90mmHg.

Q1. What could be the cause of an allergy?

A. dilution of vancomycin
B. vancomycin administration rate
C. unknown allergic reaction
D. incorrect dose selection
E. concomitant therapy

Recieved therapy:

- Vancomycin 2g x 1 + Sol. NaCl 0.9% 250ml
- Sol. Meropenem 1g x 3 100ml
- Sol. Trimeperidine (*Promedol*) 0-4 IM
- Tab. Dihydrocodeine tartrate 60 mg 1 tab x 2

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Consultation of an allergologist

Decision:

- Discontinue Vancomycin therapy
- Dexamethasone 12mg +Sol. NaCl 0.9% 100ml
- Sol. Chloropyramini hydrochloridum inj. 10mg/ml – 2ml

Day 7

Condition satisfactory. Skin clean, dry, redness and itching on the hands are no longer visible. The temperature is normal. Hemodynamically stable.

Re-administration of vancomycin (injected very slowly), the patient has a tight feeling in the neck area, changes in voice.

Discontinue and cancel Vancomycin administration.

Sol. Meropenem 1g x 3 100ml only.

- CRP 122.16 (<5 mg/L)
- WBC 8.4 (3.5-8.8 E9/L)
- Creatinine 57 (45 .. 84 µmol/L)

Day 8

Overall condition satisfactory, no complaints, the temperature is normal, hemodynamically stable

Sol. Meropenem 1g x 3 100ml

Other therapy:

Sol. Trimeperidine (Promedol) 0-4 IM,

Tab. Dihydrocodeine tartrate 60 mg x 2

Tab. Ketorolac 10mg x 3

Tab. Carbamazepinum 200mg x1

- CRP 122.16 (<5 mg/L)
- WBC 8.4 (3.5-8.8 E9/L)
- Eo, % – 0.9
- Creatinine 57 (45 .. 84 µmol/L)
- Surgical material smear results – Staphylococcus, coagulase negative

Q2. What would be the next tactic of antibacterial therapy?

A. Continue only Sol. Meropenem
B. Continue Sol. Meropenem and add another antibiotic
C. Change Sol. Meropenem to another broad-spectrum antibiotic (which?)
D. Wait for the inoculation results and then decide of the necessary change

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Day 9

- CRP 101.45 (<5 mg/L)
- WBC 6.1 (3.5-8.8 E9/L)
- Eo, % – 3.8
- Creatinine 62 (45 .. 84 µmol/L)

Sol. Meropenem 1g x 3 100ml

Day 10

- **Meropenem allergy** – rash
- Blood inoculation results – grows Staphylococcus capitis /MS
- Surgical material smear results - the anaerobic microflora has not grown

Antibiotic	Result
Ciprofloxacin	Moderately sensitive
Erythromycin	Sensitive
Clindamycin	Sensitive
Tetracycline	Sensitive
Chloramphenicol	Sensitive
Rifampicin	Sensitive
Trimethoprim / Sulfametaxazole	Sensitive
Gentamicin	Sensitive

Q3. Which antibiotic can we choose for further therapy?

A. Clindamycin
B. Erythromycin
C. Trimethoprim / Sulfamethoxazole
D. Rifampicin
E. Doxycycline

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Day 11

- Surgical material smear results – grows Staphylococcus epidermis /MR
- Replacement of antibiotic – Tab. Doxycycline 100mg x2 instead of Tab. Clindamycin 300mg

CRP – 103.61 mg/L

WBC – 12.2 E9/L

Eo – 0.5 %

Antibiotic	Result
Ciprofloxacin	Resistant
Erythromycin	Resistant
Clindamycin	Resistant
Tetracycline	Sensitive
Vancomycin	Sensitive
Rifampicin	Sensitive
Linezolid	Sensitive
Trimethoprim / Sulfametaxazole	Sensitive
Gentamicin	Resistant
Oxacillin	Resistant

Day of discharge

- Consultation with an allergologist - combined allergic reaction (small vascular vasculitis, SDRIFE) after antibacterial therapy - ceftriaxone, meropenem? doxycycline? ketorolac? use
- Contraindicated in the use of penicillins, carbapenems, cephalosporins
- Tab. Prednisolone 30mg x 1 for 2 weeks, then consultation with an allergist
- Tab. Loratadine 10mg x 2 for 2 weeks
- Methylprednisolone local therapy 1 time a day for 7-10 days
- Tab. Pantoprazole 20mg if necessary

CRP – 41.76 mg/L
WBC - 9.2 E9/L
Eo, % – 6.8