



Bilateral polysegmental pneumonia

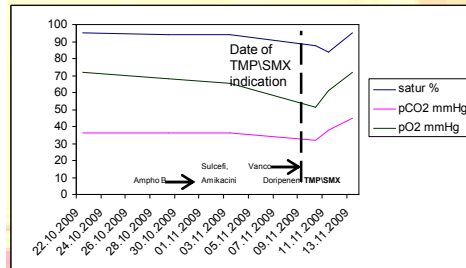
2 weeks later: worsening after cefataxim, amikin, doripenem, vancomycini, Ampo B

3 weeks later: complete resolution after changing of therapy to TMP\SMX

LDH: 793 U\I

904 U\I

591 U\I



Patient: female 30 y.o.  
 Diagnosis: small cell lymphoma since 2007  
 Prior therapy: 2 courses «FCR» in 10-11.2009  
 Outcome: pneumonia recovery, 4 more courses «FCR» till 3.2010, partial remission of the SCL

### Empiric TMP/SMX treatment of suspected *Pneumocystis jiroveci* pneumonia in patients with hematological malignancies

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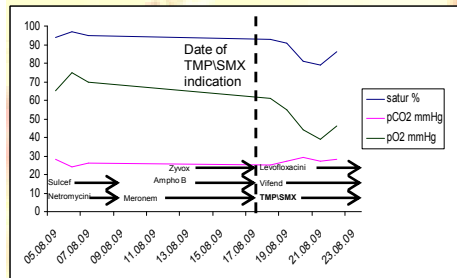
**Background:** the inclusion of trimethoprim/sulfamethoxazole (TMP/SMX) in the standard empirical treatment of respiratory infections, manifested with subtle clinical features (dry cough, subfebrile hyperthermia, breathing shortness, significant respiratory and metabolic disorders potentially suspicious to PJP) is a potential option to decrease mortality from infection caused by *Pneumocystis jiroveci* in patients receiving conventional chemotherapy for hematological malignancies.

**Purpose:** demonstration of the importance of TMP/SMX inclusion in the empirical treatment of patients with typical PJP features, despite negative test to *Pneumocystis carinii* (PC) detection.

**Materials and methods:** four pts (3 pts with NHL and 1 with ALL) with a median age of 29 (22-47) years were included in this study. All of them were in a period of immunosuppression due to chemotherapy. The diagnosis of pneumocystic infection was suspected as a result of clinical signs and compared with antigen detection in bronchoalveolar lavage (BAL) or induced sputum.

**Results:** in all 4 pts clinical and laboratory PJP-like features were observed: prolonged dry cough, prolonged subfebrile hyperthermia, slow shortness of breathing increasing, respiratory alkalosis, hypoxemia and hypocapnia, LDH increase, and X-ray manifestation prior to physical signs. Empirical antibacterial and antifungal treatment was ineffective. The PJ-antigen was negative in all cases. The appearance of clinical and laboratory symptoms previously described was estimated as suspicious for *P. jiroveci* infection and all patients were treated with TMP/SMX (15 mg/kg of trimethoprim) alone or in combination with voriconazole. All four subjects experienced transient worsening of pulmonary insufficiency and stabilization of the roentgenological changes. After three days of the TMP/SMX course a tendency to both ventilation function and X-ray improvement was observed. After 20 days complete clinical, laboratory and X-ray recovery was demonstrated.

**Discussion:** The detection of the PC-antigen in bronchoalveolar lavage or induced sputum is a sensitive method of *P. jiroveci* infection diagnostics. Nevertheless, typical clinical and laboratory features insist on the use of TMP/SMX in the empirical therapy despite PJ-antigen test negativity.



Patient: female 44 y.o.  
 Diagnosis: acute lymphoblastic leukemia since 8.2009  
 Prior therapy: 1<sup>st</sup> induction course «HyperCVAD»  
 Outcome: death at the beginning of the pneumonia-improvement

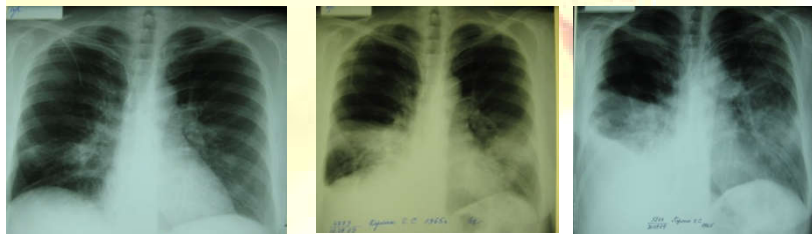
LDH:

non informative because of debut of acute leukemia

Bilateral polysegmental pneumonia, worsening after Netromycin, Sulcef

1 week later: worsening after Meronem Zyvox, Ampho B

3 days later – Rg-stabilization after Levofloxacin, Vifend, TMP\SMX



Suspicious of bilateral pneumonia on the background of 60day -agranulocytosis and Vifend and Rifampicin therapy

5 days later: worsening after doripenem and TMP\SMX indication

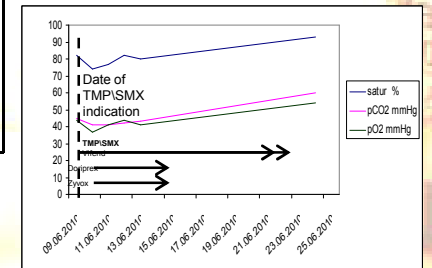
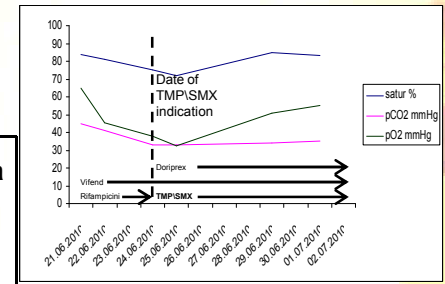
Recovery after 9 days without therapy-modifying

LDH: 351 U\I

551 U\I

304 U\I

Patient: male 47 y.o.  
 Diagnosis: mycosis fungoides since 2005  
 Prior chemotherapy: MRD BMT 12.2009, graft rejection 1.2010, 1 course «DHAP» in 7.2010  
 Outcome: pneumonia recovery, death due to *pseudomonas* sepsis in 8.2010



Patient: female 23 y.o.  
 Diagnosis: 1<sup>st</sup> early CNS-relapse of the primary mediastinal lymphoma in 3.2010  
 Prior therapy: 3 blocks «Mtx+Ara-C+ Rituximab»  
 Outcome: pneumonia recovery, complete remission of the PMNHL 7.2010

LDH: 523 U\I

651 U\I

405 U\I

Bilateral polysegmental pneumonia, worsening despite Zyvox, Doripenem (pleural effusion due to pancreatitis)

1 week later: improvement after TMP\SMX, Vifend adding

almost total recovery after 3 weeks

