Background: Pulmonary tuberculosis (TB) relapse is a life-threatening condition. Revealing the factors that lead to relapse may help developing preventive measures.

Aim: The aim of this study is to reveal the main predictive factors of relapse in patients with pulmonary TB.

Methods: We compared the data reported during the first episode of TB of 22 non-HIV patients treated for pulmonary TB and who had a relapse with those of 36 non-HIV patients treated for the same disease without relapse. Files were selected if the follow-up period exceeds 3 years. Results are expressed as a percent or a mean with [CI 95%].

Results: Patients with relapsing disease, as compared to patients without relapse, are older (61[56-65] vs 37[33-41] years-old), with history of heavier smoking (40[29-51] vs 18[10-26] Pack-Years) and a lower proportion of TB-vaccinated patients (40% vs 80%; p=0.05). The 2 last findings are likely to be correlated to age. But independently of age, in patients with relapse, we found a higher proportion of patients who have a close contact with another TB-patient (63% vs 38%; p=0.01) and a more frequent right lung involvement (50% vs 36% p=0.05).

Conclusion: From our data, relapse of pulmonary TB is more likely to occur in older patients, those exposed to contagious persons and those with a right lung involvement during the first episode of TB.
P2594
Relapse rate of tuberculosis and related factors in Korea; by using the nationwide tuberculosis notification data
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Background: The relapse rate of tuberculosis(TB) was one of the indicators that assess indirectly the level of TB control. In Korea proportion of relapse TB was reported in about 12%.

Aims: To estimate the relapse rate of TB and investigate the related factors with relapse of TB by using the nationwide TB notification data in Korea.

Materials and methods: Data source was the nationwide TB notification data in 2005. For them to check that TB patients had been reported again from 2006 to 2010. Related factors were analyzed by using multivariate logistic regression.

Results: Of 45,434 TB patients in 2005, 4,371(9.6%) were reported with TB again and 564 were reported two or more. So the cumulative relapse cases were 5,072(11.2%). A relapse rate was 4.8% in 2006, 2.4% in 2007, 1.6% in 2008, 1.4% in 2009, and 1.0% in 2010.

Related factors with relapse of TB

<table>
<thead>
<tr>
<th>OR (95% CI)</th>
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<td>Sputum smear test</td>
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<td>Medication</td>
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<td>only group 1</td>
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<td>with group 2–5</td>
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TAF = treatment after failure, TAD = treatment after default, TI = transfer in, pul = pulmonary.

Conclusion: The five-year relapse rate was 9.6%. It was likely to be underestimated because reporting rate was estimated to be 65–70%. A relapse was decreased over time, 65% of relapse occurred within two years. Related factors with relapse were various. Especially previous treatment failure or default were related strongly.

P2595
The risk factors of the TB death among case of initial treatment failure and retreatment after default
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Background: Irregular medication is considered to be related to develop MDR-TB. We reviewed chart of patients who failed in the primary treatment to find out drug resistance is associated with death.

Methods: The result of chart review study of 76,315 cases who had been charged to Health Insurance Review and Assessment service in 2008, 53,579 cases were confirmed with TB patients. Among these 53,579 patients, 1,410 patients who failed in the primary treatment and treatment after default participated in this study. The data were matched to death cause statistics provided by Statistics Korea. Hazard ratio was calculated using Cox’s proportional hazard models to analyze factors associated with death.

Results: Among 1,410 patients, 213 were MDR-TB, 29 were XDR-TB. The result of 2.7 year follow-up, 123 patients were died, 23 were MDR-TB, 8 were XDR-TB. There seemed no relationships to MDR-TB with death, but the risk for death increased with 3.3 times higher for XDR-TB patients comparing with non-XDR-TB. The hazard ratio for XDR-TB was 3.3 times higher(95%CI:1.5–6.4), for gastric ulcer was 3.8 times higher(1.4–8.3), for cancer was 3.3 times higher(1.9–5.4), for chronic renal failure was 13.9 times higher(3.8–36.2).

Conclusions: The risk for death was increased with XDR-TB in patients who failed in the primary treatment and treatment after default in spite of controlling confounding variables.
P2598
Diagnosing value of closed-pleural biopsy in pleural tuberculosis

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Introduction: Thoracoscopy is the gold standard for diagnosis of pleural tubercu-
losis (PTB). However, pleural biopsy (PB) is a blind technique of investigation of
simple first intention designed to make the histological diagnosis.

Aim: To evaluate the contribution of PB in the histological diagnosis of PTB.

Method: We study retrospectively 49 patients in whom PTB were diagnosed in our
military department. PB was sent for culture and histopathological examination.
Patients were excluded if they had positive bacilloscopy.

Results: The mean age was 32 years (12 to 78). 81% were male. A past medical
history of tuberculosis was found in 25% of cases. The most frequent symptoms are:
chest pain, cough and constitutional symptoms. The TB effusions were all exudative
with a mean lymphocyte fraction of 80%. PB was done in 89% of cases with a
mild number of fragments was 4.5. Diagnosis was confirmed by closed-PB in
61.9% of cases, boxes from the first biopsy in 53.3% of cases. Thus the sensitivity
of the PB is 53%. No complications of PB were noted. The thoracoscopy confirm
the diagnosis in 24.4% of cases. 4.4% of cases was histologically non diagnostic.

Pleurisy is isolated in 77.5% of cases associated with pericardial disease in 6.1% of
cases. Histology study found a tuberculous granuloma in 69% of cases with caseous
necrosis in 50% of cases. Culture of pleural fragment was positive in 3 in cases.
In other cases the diagnosis is retained on elements of presumptions.

Contribution of PB depends on the cost of lesions and the experience of the
operator. The PB is a minimally invasive and cost effective for the early diagnosis
of pleural tuberculosis before considering more invasive examinations.

P2599
Atypical pulmonary tuberculosis

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Introduction: Tuberculosis remains a common disease, but despite this, it is often
diagnosed with long delay due to some atypical presentations. The aim of our
work is to know unusual shapes because they may pose problems of differential
diagnosis especially with malignant diseases.

Methods: We report 50 cases of pulmonary tuberculosis atypical between 2000
and 2009: 15 cases of endobronchial tuberculosis, 16 cases with basal localization
and 20 pseudotumoral form.

Results: The average age is 37 years. Smoking is found in 17 cases and diabetes in
decision. The clinical picture is dominated by bronchial syndrome. The chest rays
show basal opacity in 16 cases, a pseudo-tumoral opacity in 19 cases and a retractile
opacity in 15 cases. Bronchoscopy visualizes endobronchial granuloma in 6 cases,
tumor buds in 5 cases andbronchial stenosis with extrinsic compression in 8 cases.
CT show suspected tubular process in 19 cases, mediastinal lymphadenopathy
which histology study found a tuberculous granuloma in 5 cases. Pulmonary tuberculosis
is confirmed by bacteriology in 23 cases, bronchial biopsies in 8 cases, transmural
biopsy in 7 cases, by thoracotomy in 6 cases and by lymph node biopsy in 2 cases.
Antibiotherapy treatment was prescribed in all cases with good evolution in 36 cases
(72%).

Conclusions: Pulmonary tuberculosis may mimic atypical, mainly malignancy
hence the interest to recognize its various unusual shapes.

P2600
Features and treatment outcome in caseous pneumonia

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Moldova

Caseous pneumonia is a clinical X-ray form of infiltrative TB or a complication
of the acute progression of fibro-cavitary TB.

Aim of study is evaluation of features and treatment outcome in CP. A retrospec-
tive study included 95 patients with CP. Most of them (84%), were new cases of
infiltrative TB and 16% fibro-cavitary TB. New-onset TB were 70% cases, relapse
cases were 21% after treatment failure 7% and after default 2%. Male/female ratio
was 2/1, age average 42.6 yrs, unemployed 64%, disease disabled 11%,
with bad living conditions 72%, homeless 10%, with medium level of education
5%.

Regarding the way of detection, all were detected passively, 66% were late
detected (average time 6 weeks). Regarding clinical picture, 77% had well-defined
respiratory syndrome and 85% intoxication syndrome. Co-morbidities had 40% (alcoholism
19%, hepatitis 11%, diabetes 7%, HIV-infection 4%). Hemato-
 logical predominates anaemia in 61% cases, lymphocytosis 48%, lymphopenia 51%,
increased ADA 42%. Radiological were revealed destructive lesions in 90% with
bilateral localization in 89%, involving more 3 lobes in all cases. At the detection,
smear positive for acid-fast bacilli were 83%, culture positive 84%. Primary drug
resistance was identified in 34% cases. Conversion rate of smear positive patients

P2601
How do we diagnose tuberculosis in early childhood?

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Pneumologico de Vila Nova de Gaia, Vila Nova de Gaia, Portugal; 2.4 Departamento de Epidemiologia, Medicina Preventiva e Saúde Pública, Faculdade de Medicina da Universidade do Porto, Portugal

Children are a special group when considering Tuberculosis(TB)diagnosis:they
can develop disease quickly after primary infection,present severe forms and there
is a lack of standardized case definition and difficulties in establishing a definitive
diagnosis

Aims: Understand reasons to initiate TB treatment in children under 6 years old
and identify risk factors associated with treatment in the absence of labora-
tory criteria

Methods: We reviewed TB records of patients younger than 6y reported in North-
ern Portugal in 2000. Epidemiological,clinical,radiological,microbiological and
treatment information were analyzed (univariate/multivariate analysis) us-
ing SPSS19.0 (p<0.05)

Results: In the last 10yrs 132 children under 6y were diagnosed with TB.60%
male. Six children had co-morbidities: five HIV-positive and one diabetic. 90% were
BCG vaccinated Information about TB detection known in 130: 104 had symptoms
(78.8%) and 26 were screened during contact investigation (19.7%). Laboratory
criteria for TB obtained in 73 (56.2%): 31 culture-positive (23.7%). Having normal
x-ray (OR 4.73, CI 1.45-15.45), positive tuberculin skin test-TST (OR 5.26, CI
1.92-14.29) and not having performed invasive tests-bronchoscopy/gastric fluid
analysis (OR 5.95, 1.89-18.67) were independently related to the decision to treat
without laboratory criteria. History of TB contact, existence of symptoms and
co-morbidities were not associated to that decision

Conclusion: Our confirmation rate among this age group was higher than in
Europe (19% in 2009). Decision to treat was neither based on laboratory criteria
nor on radiological finding consistent with TB, but on a positive TST. Criteria to
initiate treatment in this group must be reviewed in order to prevent losses cases
and over-treatment.

P2602
Gender difference in sputum positive pulmonary TB cases

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General Hospital, Alappuzha, Kerala, India Medical Education, Medical College,
Alappuzha, Kerala, India Meddical Education, Medical College, Alappuzha,
Kerala, India

Introduction: Incidences of tuberculosis among males are considered about dou-
ble that of females. There was no geographical difference reported in this rate so
far. Alappuzha district is one of backward district of South India. Females are
usually working class of manual labour group. So we are trying to evaluate
any difference from usual presentation in gender difference in sputum positive
pulmonary TB cases from a backward district of South India.

Material & method: All sputum positive cases registered for two years (ie, 2003
& 2004) were included in the study. Sputum positive grade with gender and age
strata were analyzed from the TB lab register maintained at District TB Center,
Alappuzha. Sputum was examined as per RNTCP policy and EQA activities were
implemented at the centre.

Observation: A total of 260 sputum positive cases registered during the study
period. 215 were male and 45 were female. Among the females there were no
scanty cases and only 3 cases were 1+. 3+ cases were 33 among females and 156
among males

Conclusion: A high incidence of sputum positive cases among males (1.5) may
be due to low reporting of working class females. Late reporting is also common
among females in backward areas.

P2603
Risk of serious adverse reactions during the treatment of new tuberculosis
patients

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Research and Clinical Center for TB Control, Moscow, Russian Federation

Background: Treatment of tuberculosis (TB) may be complicated by serious
adverse reactions (SADR)s. Correct risk assessment before the start of treatment
enables to choose the right preventive strategy and thereby to reduce a frequency
of SADRs. The aim was to determine the rates of and risk factors for SADR.s
 during treatment of new TB patients.

Methods: 200 HIV-uninfected new pulmonary TB patients admitted to Research
Thematic Poster Session Halle A-32 - 12:50 - 14:40

Monday, September 3rd 2012

and Clinical Center for TB control 2009 to 2011 were monitored for ADRs during the intensive phase of treatment. The median age was 28.0 (IQR 22.44) yrs, 93 were female, 108 were smear-positive, 172 received only first-line anti-TB drugs. ADRs having NCI CTCAE Grade 3-4 were recorded as serious. Multivariate logistic regression was used for risk assessment.

Results: Seventy-six (37.8%) experienced at least one SADR, to a total of 95 events (47 - hepatitis, 19 – allergic reactions, 14 - hyperuricemia, 7 - deafness). Female sex (OR = 2.11, 95%CI: 1.08-4.12), a smear-positive TB (OR = 2.08, 95%CI: 1.05-4.13), a cavity diameter > 30 mm (OR = 5.11, 95%CI: 1.44-18.12), a body mass index (BMI) <32 kg/m2 (OR = 2.31, 95%CI: 1.18-4.55) and a history of food/drug/food (OR = 2.94, 95%CI: 1.33-6.49) were identified as risk factors for developing a SADR.

Conclusion: During anti-TB treatment more than the third part of new TB patients experienced SADRs (more often hepatitis and allergy). Female sex, a history of food/drink allergy, low BMI, smear-positive TB and large cavities are the risk factors associated with SADRs.

P2604 Drug interaction in tuberculosis treatment – The role of pharmacists

Oksana Avramchuk, Oleksiy Denisov.

Introduction: Tuberculosis as a disease demands long-term multidrug treatment. Most first-line antitubercular drugs have clinically significant interactions with numerous drugs. In our clinic pharmacists review the drug therapy of all patients receiving antitubercular drugs.

Aim: To screen for drug interactions in patients with first-line antitubercular drugs and assess their clinical significance.

Methods: From June 2011 to February 2012 clinical pharmacists performed regular reviews of interactions with first-line antituberculosis therapy in 57 hospitalized patients. The detected interactions were discussed with the doctor and changes in therapy implemented. Data on detected interactions were collected and analysed.

Results: Drug interactions were identified in 33.3% (18/54) of patients. The average number of drug interactions per patient was 1.4 (25/18). Most interactions were with rifampicin (92%, 23/25) followed by isoniazid, 8% (2/25) were with pyrazinamide. The most common interacting drugs were bisoprolol (5/25), esomeprazole and methadone (each 2/25) and clopidogrel and statins (each 2/29). Other interactions were with warfarin, carbamazepin, methylidoxigin, methylprednisol, ciprofloxacin, ronizin, terylcape, opromazole and carbodiil (each 1/29).

Conclusion: Every third patient receiving first-line antitubercular therapy is at risk of experiencing an interaction with drugs in chronic therapy. These drugs belong to various different drug groups. Clinical pharmacists can detect these interactions and suggest interventions to assure safe and effective therapy. The actual clinical significance of these interactions is yet to be analysed.

The project was supported by a grant of the Health Insurance Institute of Slovenia

P2605 The pharmacotherapy options for the intensive phase treatment in patients with primarily diagnosed pulmonary tuberculosis

Ninca Ceobon Lucpeč, Janez Toni, Petra Švetina Sorti, Mitja Kosič.

Method: From June 2011 to February 2012 clinical pharmacists performed regular reviews of interactions with first-line antituberculosis therapy in 57 hospitalized patients. The detected interactions were discussed with the doctor and changes in therapy implemented. Data on detected interactions were collected and analysed.

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The project was supported by a grant of the Health Insurance Institute of Slovenia

P2606 Anti-tuberculosis therapy as a reason for ejaculatory disorders

Ekaterina Kolchavaeva, Elena Brzhuzhakit, Denis Khlobotin, Alexander Osadchyi.

Urological, Research TB Institute, Novosibirsk, Russian Federation

Introduction: The sexual life is an integral part full and happy life. Patient with primary pulmonary tuberculosis (TB) does not suffer from this disease itself as well as from different complications. The aim was to estimate the frequency of ejaculatory disorders in men suffering from tuberculosis and to determine the effect of TB treatment on the ejaculation.

Material and methods: 98 pulmonary TB patients were enrolled in study. The intravaginal latency time before onset of TB was estimated retrospectively and in 3 months of anti-TB therapy.

Results: Before anti-TB therapy 14.3% of pulmonary TB patients had ejaculatory disorders: 10.2% had premature ejaculation, and 4.1% delayed ejaculation. The rest 85.7% of patients had normal ejaculation.

Among the three months of the therapy with 4 anti-TB drugs (isoniazid, rifampicin, pyrazinamide and streptomycin) the proportion was changed significantly. The share of patients with normal ejaculation decreased to 61.2%. On contrary, frequency of premature ejaculation increased twice (20.4%), and delayed ejaculation – in 4.5 times (18.4%).

Conclusion: Proportion of ejaculatory disorders in patients with pulmonary TB before a start of anti-TB therapy was the same as in population as whole. So, tuberculosis as a disease doesn’t damage an ejaculatory function. The three months of TB treatment with four drugs significantly worsened the ejaculatory function of patients. The high growth of delayed ejaculation may be explained by impaired activity of anti-TB drugs. So, tuberculosis as a disease doesn’t damage an ejaculatory function, but the treatment of tuberculosis does it. There is necessary a special pathogenetic therapy to prevent this complication.

P2607 Predictive factors for antituberculosis treatment failure

Ekaterina Kolchavaeva, Elena Brzhuzhakit, Denis Khlobotin, Alexander Osadchyi.

Urological, Research TB Institute, Novosibirsk, Russian Federation

Methods: We compared risk factors for TF in a study group (SG) of 110 patients with pulmonary TB failing after 5 months of DOTs and a control group (CG) of 108 patients cured with DOTS.

Results: Males 60% SG vs 50% CG, average age 35.6 SG vs 42.5 CG, unemployed 76% SG vs 48% CG, with bad living conditions 63% SG vs 48% CG (p<0.05). Were detected 80% of patients from both groups by passive way with known TB contact 26% SG vs 20% CG. All patients (100%) had destructive forms of TB with positive sputum, but 84% of SG vs 24% in CG in patients with positive blood smear for TB (CGp<0.05). Susceptibility test detected primary resistance in 15% SG vs 12% CG. Co-morbidities had 56% of SG vs 24% in CG, most frequent alcoholism, tuberculosis, diabetes, HBV infections was 20% in SG vs 100% in CG. Treatment outcome in SG cured 42%, 30% dead, 10% default,18% continue another treatment regimen vs 100% cured in CG.

Conclusion: Predictive factors for TF: treatment not adapted to susceptibility testing, noncompliance with treatment, low social status, extensive TB with co-morbidities.

P2608 Incremental yield of first, second and third spumtum acid fast bacilli smear by microscopy in the diagnosis of pulmonary tuberculosis among patients referred to St. Paul Hospital Iloilo Public Private Mix directly observed treatment shortcourse

Kristine Kara Gayon, Emer Lourodes Ponje, Ilie Solis, Rosario Toledo III

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Material and methods: Between April 2011 and April 2012 the microscopy of smear positive sputum from patients referred to St. Paul Hospital Iloilo Public Private Mix was done. The yield was calculated.

Results: 92% of smear positive patients showed AFB on the first sputum sample. 6% of patients showed 2 samples positive for AFB. The smear yield did not change after the 3rd sample.

Conclusion: The microscopy of smear positive sputum from patients referred to St. Paul Hospital Iloilo Public Private Mix directly observed treatment shortcourse has a high yield.
2007, 670 suspects, 17% were positive. In 2008, 734 suspects, 16% were positive. In 2009, 401 suspects, 14% were positive. Result showed reliance on the first specimen detect 85% of the sputum positive patients in 2003, 94% in 2004, 91% in 2005, 98% in 2006, 97% in 2007, 94% in 2008 and 91% in 2009. If the sputum negative specimen was taken into consideration, then 97% were detected in 2003 and 2004 and 100% detected in 2005–2009. As shown in this study that almost 100% of cases can be detected with submitting 2 specimens, one of which is the early morning specimen, the DOTS could improve the compliance of sputum submission of the patients as well as reduce the cost.

P2609
Presentations and treatment response of pulmonary tuberculosis in type 2 diabetes mellitus
Safis Yalçın, Chest Department, Atis University Hospital, Istanbul, Turkey

Introduction: The association between diabetes and tuberculosis and their synergistic role in causing human disease has been recognized for centuries. They have serious implications on each other. Aim: The aim was to study the coexistence between Tuberculosis and Diabetes, and to determine whether diabetes alters the radiological manifestations of pulmonary tuberculosis.

Methods: Patients with both Tuberculosis and Diabetes (28 patients) were compared with another TB patients without diabetes (30 patients). All were subjected to sputum smear for AFB examination and X-ray chest. Bronchoalveolar lavage and tuberculin test were performed in selected cases.

Results: Diabetes diagnosed in 48.3% of TB patients. The majority were old females (60.7%) with mean age 51.80 ± 11.32. All patients associated with diabetes had type 2 DM. Most of them had diabetes before TB infection (57.1%). TB caused uncontrolled diabetes in 71.4% of cases, while diabetes decreased the response to anti-TB drugs in 32.1%. In diabetic patients, lesions of tuberculosis were found to be bilateral in 39.3%, followed by left lung. It was significantly different from control group as it affected either right or left lung. Lower lung zone affection was significantly higher among diabetic patients. 71.4% vs 33.3%. Atypical radiological features were significantly common in diabetic patients. Cavitating lesion and pneumonia were the most common presentation (42.9% and 25%). Patchy shadows reported in 31.4% while one case presented with normal x-ray. Bronchectasis was reported in upper lobe in 7.1%.

Conclusion: DM and TB had an adverse affect on each other. The atypical radiological images masked the diagnosis of tuberculosis in diabetic patients, which may delay the proper treatment.

P2610
Cutaneous tuberculosis: Two cases report
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Tuberculosis, which may involve most organs is still a major health problem in developing countries. Lupus Vulgaris is a rare form of extrapulmonary tuberculosis. Cutaneous tuberculosis must be considered in case with chronic skin lesions because tuberculosis prevalence is high in our country. Early diagnosis and treatment of patients with skin tuberculosis is extremely important in order to prevent complications.

Case I: A 36-year-old man attended our clinic with progressive, asymptomatic, annular skin lesions on his nose. There was past history of tuberculosis, and he received anti-tuberculosis treatment (HRZE) one year ago. There were no systemic symptoms such as tiredness, loss of appetite, nocturnal perspiration. The chest X-ray showed the apical fibrosis. A cutaneous biopsy taken from a lesion on the nose showed a granulomatous infiltration throughout the thickness of the dermis. The patient was diagnosed as a case of lupus vulgaris and were treated with anti-tuberculosis drugs (HRZE). There was dramatic improvement in the skin lesions after two months of treatment.

Case II: A 44-year-old woman attended our clinic with progressive, asymptomatic skin lesions on her face. The skin lesions began six months ago, and didn’t improve after local dermatological treatment. There weren’t systemic and respiratory symptoms. There wasn’t past history of pulmonary tuberculosis. The chest X-ray was normal. A cutaneous biopsy showed a granulomatous infiltration. The patient was diagnosed as a case of lupus vulgaris and were treated with anti-tuberculosis drugs (HRZE). There was improvement in the skin lesions after one month of treatment. Treatment’s of two cases still continue.

P2611
Tuberculosis and tumor necrosis factor alpha antagonist: Our experience
Nuria Maria Reina Martí, 1Ezequiel Ortega Sánchez Tejada, Lidia López López, Ana Milena Franco Torres, 2José Luis Velasco Garrido, Carmen Fernández Aguirre, 3María Victoria Hidalgo Sanjuán. Pulmonology Department, Virgen de la Victoria University Hospital, Málaga, Spain

Tumor necrosis factor alpha (TNF-alpha) antagonist are used for the treatment of chronic inflammatory disorders when they are refractory to standard therapy. Among its side effects are tuberculosis infection.

Objective: To evaluate the tuberculosis in patients treated with TNF-alpha antagonist.

Method: A retrospective review of patients treated with infliximab, etanercept and/or adalimumab in our hospital. We obtained 633 potential cases. We included patients with a positive cultivation or histologic findings suggestive of Mycobacterium tuberculosis infection. Data collected: sex, age, underlying disease, prior immunosuppressive therapy, tuberculosis screening and prophylaxis, TNF-alpha antagonist used and location of the infection.

Results: Of the 633 patients, three developed active tuberculosis. Two men received chemotherapy with isoniazid and they were affected by psoriatic arthropathy treated with infliximab (previously with methotrexate). One of them, a 39-year-old man, developed pulmonary tuberculosis and the another one, a 53-year-old man, a genitourinary disease with a resistant germ to isoniazid. And a 58-year-old woman with rheumatoid arthritis treated with infliximab (and previously with sulphasalazine, penicillamine, chloroquine and methotrexate), with unknown screening and prophylaxis, who developed pulmonary tuberculosis.

Conclusions: Screening and prophylactic measures can not eliminate the risk totally. All the patient that developed tuberculosis disease were undergoing infliximab treatment and all of them suffered rheumatic disease. At least two of them developed tuberculosis disease despite chemoprophylaxis. Two developed pulmonary tuberculosis disease and another one genitourinary disease.