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Tuberculosis in patients with ankylosing spondylitis treated with anti tumor necrosis factor



G. Kinikli¹, O. Kucuksahin¹, M. Turgay¹, A. Ates¹, S. Kinikli²

¹ Ankara University, Ankara, Turkey

² Ankara Education and Research Hospital, Ankara, Turkey

Background: Ankylosing Spondylitis (AS), a chronic inflammatory disease with an unknown etiology influences mainly the axial skeleton, as well as peripheral joints, entheses and extra-articular systems. Clinical characteristics of antitumor necrosis factor (TNF) agents-related tuberculosis (TB) in AS are not well described. The aim of this study was to present the follow-up results of a single center from Turkey, a country with a high rate of active and latent tuberculosis infection (LTBI), for INH chemoprophylaxis in patients receiving anti-TNF- α therapy for AS infection.

Methods & Materials: In this study, patients who received an anti-TNF agent for AS were evaluated for the presence of active infection or LTBI by a chest X-ray and a tuberculin skin test. Patients with LTBI were given chemoprophylaxis 1 month prior to commencement of anti-TNF treatment. All patients were followed-up bimonthly for any signs of pulmonary or extrapulmonary TB. New cases of TB were identified by reviewing the medical records of 164 patients with AS treated with (TNF- α) blockers; adalimumab (n=68), infliximab (n=39), or etanercept (n=53) between 2003 and 2012. Demographics data, the presence of HLA-B27 positivity, PPD, urine analysis prior to urine culture for mycobacterium tuberculosis, disease and (TNF- α) blockers treatment duration and INH chemoprophylaxis were recorded.

Results: A total of 164 patients, 57 female (34.5%) and 107 male (65.5%), with a mean age of 41.0 ± 13.1 years (18–78) were enrolled in the study. The presence of HLA-B27 was positive in 72 patients (43.6%); negative in 29 patients (17.6%); undefined in 64 patients (38.8%). LTBI was identified overall 99 patients all of whom received chemoprophylaxis those of 76 (46.1%) for 9 months, 9 (5.5%) for 6 months. Only 6 patients (3.6%) received chemoprophylaxis for 3 months due to INH hepatotoxicity. Only 2 patients received chemoprophylaxis for 9 months developed urinary tract tuberculosis at 21 (Adalimumab) and 24 (Etanercept) months, (PPD with 12 mm; PPD with 13 mm) respectively. Urine culture for mycobacterium tuberculosis was positive in both patients.

Conclusion: Our results suggest that urinary tract tuberculosis in both patients was a new tuberculosis infection rather than a reactivation of latent tuberculosis.

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The role of anaerobic bacteria in bite wound abscesses: Results of 53 young adult patients



B. Kocazeybek¹, M. Demirci¹, Z. Taner¹, R. Caliskan Algingil¹, A. Karakullukcu¹, K. Can¹, P. Yuksel², H. Bahar Tokman¹

¹ Istanbul University, Cerrahpaşa Medical Faculty, Istanbul, Turkey

² Istanbul University, Cerrahpaşa Medical Faculty, Istanbul, Turkey

Background: Aerobic and especially anaerobic bacteria of the skin flora of the victim and the oral flora of the biter were reported as the bacteria playing an important role in the etiology of bite infection which can lead to serious complication. The aim of this study is to determine the aerobic and anaerobic bacteria in pus samples of bite wound abscesses and to detect the antimicrobial resistances of anaerobic bacteria.

Methods & Materials: From December 2012 until November 2013, pus taken from 53 young adult patient's bite wound abscess (12 human bites, 41 animal bites) were studied. Aerobic bacteria were isolated using standard microbiological culture methods and identified by Phenix. Anaerobic bacteria were isolated by the inoculation of pus on Schaedler agar supplemented with 5% sheep blood and vitamin K1 and by an incubation on anaerobic conditions. Anaerobes were identified by API 20 A. Their resistance to penicillin, amoxicillin+clavulanic acid, cefoxitin, clindamycin, metronidazole and imipenem were detected with E-test.

Results: Aerobic bacteria were isolated in all of the samples. 58.4% were *S.aureus* 9.4% *S.pyogenes*, 7.5% *Eikenella corrodens*, 3.7% *H. influenzae*, 16.9% *E.coli* and 3.7% were *Pasteurella* spp. Anaerobic bacteria were isolated in 48 pus samples and they were mixed with aerobic bacteria in 46 of them. From a total of 79 anaerobes 34.1% were *Peptostreptococcus* spp., 29.1% *Propionibacterium acnes*, 13.9% *Prevotella melaninogenica*, 10.1% *Fusobacterium nucleatum*, 6.3% *Porphyromonas gingivalis*, 5.2% *Veillonella* spp and 1.2% was *Bacteroides fragilis*. One *B.fragilis* strain, 11.1% of *Peptostreptococcus* spp and 36.3% of *P. melaninogenica* produced beta lactamase. 36.3% of *P.melaninogenica* and, 11.1% of *Peptostreptococcus* spp were resistant to penicillin and cefoxitin. 1 strain of *B.fragilis*, 22.2% of *Peptostreptococcus* spp and 18.1% of *P.melaninogenica* were resistant to clindamycin. The highest penicillin MIC was >256 $\mu\text{g/ml}$, cefoxitin MIC 32 $\mu\text{g/ml}$ and clindamycin MIC >8 $\mu\text{g/ml}$.

Conclusion: Aerobic and anaerobic Gram positive bacteria were found as the most frequent infectious agents in bite wound abscesses. Infection of the bite wound and complication can be prevented by the selection of prophylactic antibiotics upon the resistance pattern of the mostly detected causative agents.

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