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Diabetic foot infection and inflammatory markers – does it make sense?

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Background and aims: Immediate introduction of antimicrobial therapy is a cornerstone of treatment of infected diabetic foot ulcers. The decision for antibiotic therapy is usually made on clinical grounds. We sought to investigate whether laboratory tests: C-reactive protein (CRP), erythrocyte sedimentation rate (ESR) and white blood cell count (WBC) provide any additional information that would help to confirm foot ulcer infection. **Methods:** Data from the routine workup of 367 diabetic foot ulcer patients with local signs of infection who attended our clinic in the years 2007 and 2008, were analysed. All of them lacked systemic signs of infection and were treated on out-patient basis. X-rays of the affected foot as well as superficial wound swabs for aerobic in anaerobic cultivation were taken. **Results:** The swabs yielded 1.95 ± 1.37 isolates per sample. 51 swabs (13.9%) were sterile. Anaerobes were isolated from 89 ulcers (24.3%). Osteitis was confirmed in 123 cases (33.5%). Significant correlation between CRP and ESR as well as between CRP and WBC was demonstrated (p= 0.003 and 0.000, respectively). The subgroups with sterile and positive swab differed significantly with respect to CRP (p=0.000), but not with respect to WBC and ESR (p = 0.408 and 0.992, respectively). The subgroup with confirmed osteitis had significantly higher ESR (52.84±30.26 vs 38.47±25.89, p=0.002)and HbA1c (and 8.04±1.82 vs 7.61±1.44, p=0.039) than the subgroup without osteitis. No significant difference in the number of isolates, CRP and WBC was found with respect to osteitis. **Conclusions:** In our opinion, determination of laboratory signs of inflammation in diabetic foot ulcer patients with local signs of infection does not add much to the correct diagnosis. On the other hand, wound swab and x-rays of the affected foot provide useful information for the adjustment of therapy later in the course of the disease.