LETTER TO EDITOR

Comments on: "Comparison of microbiological results of deep tissue biopsy and superficial swab in diabetic foot infections"

"Diyabetik ayak enfeksiyonlarında derin doku biyopsisi ile yüzeyel sürüntü kültürünün mikrobiyolojik karşılaştırılması" üzerine yorum

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Dear Editor;

We read the article by Bozkurt et al., which assessed the reliability of superficial swabs in diabetic foot ulcers with great interest.[1] We believe that including anaerobic culture results is an important strength of their study, as this may help the clinician guide the empiric antimicrobial treatment decision. This paper will not only provide a considerable contribution to the clinicians in diagnosing and treating diabetic foot infections but will also serve as a referring source in reflecting the current microbiological etiology of these wounds in Turkey. However, we have some remarks concerning the methodology and conclusions.

Bozkurt et al. claim that by simply relying on the microbiological results obtained from superficial swab, 84% of the patients in the osteomyelitis group and 90% of the patients in the non-osteomyelitis group would have received an accurate anti-microbial treatment. However, they seem to have overlooked that twelve of the wounds in the osteomyelitis group and three in the soft tissue infection group would be over-treated because their superficial samples included additional microorganisms than those obtained from deep tissue cultures. Moreover, unnecessary broadening of the anti-microbial coverage may both lead to resistance to antimicrobial drugs and to an increased incidence of MRSA. This drawback reflects actually the primary concern of superficial swab samples, as they are likely to be contaminated by colonizers. In a recent study, in which the reliability of specimens from superficial swabs cultures were compared with those of deep tissue in patients with diabetic foot ulcers, we have found that if only the results of the swab culture had been taken into account when prescribing antibiotics, 32.5% of the patients would have been mistreated.[2]

One of the important findings of this study is the high rate of chronic wounds found in osteomyelitis group compared with those in the soft tissue infection group (64% vs. 14%, p=0.001). This clearly supports the predominant view, which recognizes wound chronicity as a major risk factor for the development of bone infection and further underlies the importance of prompt and appropriate management of diabetic foot infections to avoid eventual adverse outcomes such as prolonged hospitalization and antibiotic use and increased risk of amputation. Furthermore, bacterial spectrum differed significantly between groups. Gram-negative bacteria accounted for the 26 of 39 (66%) bacteria in the osteomyelitis group and for the 18 of 47 (38%) bacteria in the soft tissue infection group (p=0.01). This shift to more negative pathogens in the osteomyelitis group reflects another major adverse consequence of chronic wounds.

In the Methods section, the authors claim that patients with gangrenous wounds or dry es-

chars were excluded. However, we noticed that on Table 4, ten patients were classified as Wagner grade 4, which is defined as partial necrosis of foot. The authors classified wounds according to the Wagner classification system. This system has been widely used in the past, yet, it is largely based on the degree of depth and the presence of gangrene and hence has been widely criticized lately due to its lack of specificity and its limitations in classifying 'infected' diabetic foot ulcers.[3,4] Future studies should use recently developed classification systems which provide a better insight through infection, namely the University of Texas classification.[3-6]

Overall we appreciate the authors' hard work and hope our concerns will be accepted as contributions, since we believe that this report together with future research efforts will help the clinicians to better diagnose and treat wound infections. We think that deep tissue sampling should be preferred in diabetic foot infections.[2] Deep tissue sampling can be thought to physicians, dealing with chronic wounds, during their specialty education or by postgraduate education programs (workshops, conferences, courses, etc.).

Sincerely,

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