Commentary: Accuracy of core needle biopsy for musculoskeletal tumours

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For musculoskeletal lesions, a good biopsy is the sine qua non of diagnosis, staging, and treatment. Most treatment protocols for malignant bone tumours are based on correct grading and staging of lesions determined by a good biopsy. The technical difficulty and complication rates are low for a core needle biopsy, compared with open methods, particularly in moribund patients.

Biopsy protocols should be strictly adhered to, and compartmental segregation and spilling respected. Thus, the biopsy should be performed by the same surgeon that will perform the definitive surgery. The diagnostic accuracy of core needle bone biopsy is well established for both malignant and benign bone tumours.

In this issue, Seng et al. reviewed musculoskeletal tumours in 134 patients to determine the diagnostic accuracy of core needle biopsy. The biopsy findings did not match the final histopathology in 7 of the cases. This was attributed to insufficient material being retrieved, which is a common problem. Notably, there were no major post-biopsy complications, thereby supporting the safety of core needle biopsy. Although core needle biopsy is a well-established diagnostic procedure for bone tumours, its role to assess musculoskeletal tumours is not well defined, particularly as most soft-tissue tumours can be easily diagnosed by a fine needle aspiration. In the Seng et al. study, the diagnosis of most soft-tissue tumours could also be established by a core needle biopsy, although 5 specimens were reported to be benign but turned out to have a malignant histopathology. This highlights over-dependence on core needle biopsy for some lesions. It is important to note that the diagnosis of haematological malignancies (2 in this series) should depend on bone marrow aspiration, rather than core needle biopsy. The study yielded a sensitivity and specificity of 95% (97/102) and 97% (31/32) for core needle biopsy, respectively, which were comparable to those reported in the literature.

REFERENCES