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Non-diagnostic biopsies in an oncology unit. Incidence and consequences.

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Background:

Obtaining an accurate diagnosis is the aim of any biopsy of a musculo-skeletal lesion. This study investigated the accuracy of biopsies carried out at our unit over a three month period and also identified the consequences of a non-diagnostic biopsies.

Method: All patients undergoing a biopsy were identified from our MDT records over a three month period. The biopsy diagnosis was correlated with the eventual diagnosis and in those in whom there was a discrepancy the effects of the initial non-diagnostic biopsy was investigated.

Results: 222 patients had a biopsy over a three month period, 94 Jamshidi bone biopsies, 59 Trucut biopsies, 28 image guided (CT or U/S) and 41 open biopsies. There were 27 non-diagnostic biopsies but in 16 cases the MDT agreed a diagnosis and management and no further biopsy was required. There were thus 11 non-diagnostic biopsies (5%) and on average these led to a delay in reaching a diagnosis of 3 weeks which was usually reached through one or more further biopsies, mostly image guided. The non-diagnostic rate was highest for needle biopsies (5%) and open biopsies (5%). In terms of eventual diagnosis the initial failure rate was lowest for malignant bone and soft tissue sarcomas (3 of 50, 6%) and highest for lymphomas (15%) and for non-oncological lesions eg haemangiomas. Of the patients with non-diagnostic biopsies, there was the anxiety of waiting for a confirmed diagnosis (and 7 of the 11 turned out to have a malignancy). One patient still does not have a definite diagnosis. In no case was there any significant difference in treatment as a result of a non-diagnostic biopsy.

Conclusion:

Patients need to be warned that whatever method of biopsy is used there will be a possible failure to obtain a diagnosis. Whilst a non-diagnostic biopsy may rule out malignancy and be accepted by the MDT, repeat biopsy is required in 60% of those cases. In no case was a patients management or outcome significantly altered by a non-diagnostic initial biopsy in this cohort.

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