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CT guided percutaneous vertebral body biopsy: Our experience in spine mining

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Cover Page Footnote

Background: CT guided biopsy of the spine is considered a safe, accurate and relatively inexpensive technique. The authors present data of a retrospective study of 52 CT guided biopsies of the spine observed over a period of one year in a tertiary care hospital of southern India. Objectives: To discuss the methodology of percutaneous CT-guided biopsy of spine and determine its diagnostic accuracy and clinical usefulness in the hands of a novice. Methods: Spine biopsy was performed using Ackermann Bone Biopsy Needle Set with 16 slice GE Optima CT. Most cases were under local anaesthesia and in prone position. Bone and soft tissue specimens obtained were sent for histopathological analysis. Results: Out of 52 patients, 40 were males and 12 females with ages ranging from 3 to 74 years. There were 20 dorsal, 28 lumbar, and 4 sacral lesions used as biopsy sites. Histopathologically confirmed reports were 38 in number and biopsy inconclusive were 14 in number with a diagnostic accuracy of 73%. Pathological specimens revealed 6 metastasis, 1 lymphoma, 2 plasmacytoma, 1 Ewing's sarcoma, 2 hemangiomas, 2 GCT/ABC and 24 infections [16 tubercular and 8 others]. Minor complication was noted in one patient who experienced radicular symptoms (1.2%). Conclusion: CT guided biopsy is safe and has good accuracy in the evaluation of spinal lesions even in the hands of a novice. Higher diagnostic accuracy rates can be obtained with the experienced hands, use of both 1 and 2 cm biopsy needles, obtaining two or more bone specimens, and adjunctive use of soft tissue wherever necessary

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Original article

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Abstract

Background: CT guided biopsy of the spine is considered a safe, accurate and relatively inexpensive technique. The authors present data of a retrospective study of 52 CT guided biopsies of the spine observed over a period of one year in a tertiary care hospital of southern India. **Objectives:** To discuss the methodology of percutaneous CT-guided biopsy of spine and determine its diagnostic accuracy and clinical usefulness in the hands of a novice. **Methods:** Spine biopsy was performed using Ackermann Bone Biopsy Needle Set with 16 slice GE Optima CT. Most cases were under local anaesthesia and in prone position. Bone and soft tissue specimens obtained were sent for histopathological analysis. **Results:** Out of 52 patients, 40 were males and 12 females with ages ranging from 3 to 74 years. There were 20 dorsal, 28 lumbar, and 4 sacral lesions used as biopsy sites. Histopathologically confirmed reports were 38 in number and biopsy inconclusive were 14 in number with a diagnostic accuracy of 73%. Pathological specimens revealed 6 metastasis, 1 lymphoma, 2 plasmacytoma, 1 Ewing's sarcoma, 2 hemangiomas, 2 GCT/ABC and 24 infections [16 tubercular and 8 others]. Minor complication was noted in one patient who experienced radicular symptoms (1.2%). **Conclusion:** CT guided biopsy is safe and has good accuracy in the evaluation of spinal lesions even in the hands of a novice. Higher diagnostic accuracy rates can be obtained with the experienced hands, use of both 1 and 2 cm biopsy needles, obtaining two or more bone specimens, and adjunctive use of soft tissue wherever necessary.

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