

# Vertebral biopsy

Vertebral biopsy is fundamental in determining whether a spinal lesion is of infectious or neoplastic etiology. Accurate diagnosis is critical for proper medical and/or surgical treatment and consequently for the prognosis of the patient. CT-guided percutaneous spinal biopsy (CTSB) may minimize the risk of contamination and complications.

**AIM:** To demonstrate the importance and efficacy of CTSB and subsequent microbiologic/histological examination in the diagnosis of spinal lesions, particularly for those of an infectious nature.

**MATERIALS AND METHODS:** Two series of spinal infection patients. Prospective series of 69 patients (2009-2011), 24 of whom underwent CTSB. Retrospective series of 130 patients (1999-2008), 65 of whom underwent CTSB. All patients had microbiologic and histological testing of biopsy samples, when possible.

**RESULTS:** For the 2009-2011 patient series, histological examination yielded a diagnosis in 81.8% of cases, microbiologic culture and PCR for *Mycobacterium tuberculosis* in 45.8%. For the 1999-2008 series, histological examination yielded a diagnosis in 69% of cases, culture in 38.5%. Spinal lesions in 4 patients with previous histories of malignancy were assumed to be metastatic and treated with radiation at outside institutions. After biopsy, all were revealed to be spondylodiscitis.

**CONCLUSIONS:** Percutaneous CT-guided needle biopsy is the mainstay of diagnosis for spine lesions of unknown etiology, thus guiding appropriate treatment. Histological diagnosis, when possible, is critical before initiation of therapy and may be helpful in cases where cultures are negative. In the case of a spinal lesion of unknown origin, even in the setting of a previous malignancy, metastasis should not be assumed; infection and new primary lesions should always be considered as part of the differential diagnosis <sup>1)</sup>.

<sup>1)</sup>

Gasbarrini A, Boriani L, Salvadori C, Mobarec S, Kreshak J, Nanni C, Zamparini E, Alberghini M, Viale P, Albisinni U. Biopsy for suspected spondylodiscitis. *Eur Rev Med Pharmacol Sci*. 2012 Apr;16 Suppl 2:26-34. PubMed PMID: 22655481.

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