

# ACCURACY AND ADEQUACY OF FLUOROSCOPIC ASSISTED PERCUTANEOUS TRANSPEDICULAR BIOPSY IN COMPARISON TO CT GUIDED PERCUTANEOUS TRANSPEDICULAR BIOPSY IN SPINAL LESIONS

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**Introduction:** Spinal biopsy is the most important step of investigation in a spinal lesion to achieve an accurate diagnosis to provide an adequate treatment to the patient. Percutaneous spine biopsy has widely replaced open biopsy as it is more cost effective, less invasive, and has fewer complications than open procedures. With availability of Ct-scan, fluoroscopy and MRI, percutaneous transpedicular vertebral biopsy has now become popular as a minimally invasive technique for biopsy of spinal lesion. In this study, we compared the type of percutaneous transpedicular biopsy which were fluoroscopic and Ct-guided assisted in term of the accuracy and adequacy of the sample taken via both procedures.

**Methodology:** This is a retrospective single center study which was done by reviewing the patient's record who had been diagnosed with a spinal lesion and undergone biopsy at Hospital Kuala Lumpur from January 2013 to December 2017. The statistical analysis of parametric data was performed using a descriptive analysis (mean and standard deviation). Correlation tests performed using Fisher Exact Test. The p value of < 0.05 is considered to indicate statistically significant difference. A total of 30 patients from each procedure was selected with the mean age of 53 years old.

**Discussion:** There were 61.7% (37 patients) patients were having spinal infection lesion that underwent the biopsies while the other 38.3% (23 patients) of the patient were having spinal tumor lesion. Fluoroscopic assisted percutaneous transpedicular biopsy shows higher percentage of sample accuracy with 86.6% as compared to Ct guided transpedicular biopsy with 80% accuracy. In terms of adequacy, fluoroscopic assisted percutaneous transpedicular biopsy has yield adequacy of 100% as compared with 93.3% adequacy of Ct-guided percutaneous transpedicular biopsy

**Conclusion:** Study shows no significant different in both groups either for accuracy and adequacy.