Histological yield

Studies have shown that in 2-15% of cases a pathologic diagnosis is not achieved [1) 2) 3) 4)] leaving the physician and the patient uncertain as to the next step. Some studies examined the characteristics that predispose toward a nondiagnostic biopsy, such as nonneoplastic lesions [5) 6)].

Pasternak et al. aimed to analyze the contemporary diagnostic yield of stereotactic biopsies, predictors for non-diagnostic biopsies, outcome, and follow-up strategy after non-diagnostic biopsy. They conducted a single-center retrospective study of 311 adult patients undergoing stereotactic biopsies due to a newly diagnosed lesion between 2012 and 2018. Patient data regarding comorbidities, presenting symptoms, imaging features, and non-invasive diagnostic procedures were obtained. The overall diagnostic yield was 86.2% and differed significantly between the various suspected diagnosis groups and was the highest when suspecting primary brain tumor compared with non-neoplastic lesions (91.2% vs. 73.3%, $p > 0.001$). Predicators for non-diagnostic biopsies were small lesion size, lack of contrast-enhancement, presence of sepsis, or underlying hemato-oncological disease. In case of non-diagnostic biopsy, a re-biopsy was performed in 12 cases, revealing a final diagnosis in 75%. In 16 cases, empiric therapy was started based on the suspected underlying disease. Close follow-up was performed in the remaining 15 cases. They showed that stereotactic biopsy is a safe procedure with reasonable diagnostic yield even for non-neoplastic lesions, when non-invasive diagnostic was inconclusive. In addition, they developed treatment recommendations for cases of non-diagnostic biopsies [7)].

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