Stereotactic biopsy in elderly patients: risk assessment and impact on treatment decision.


Abstract

To evaluate risk profile, diagnostic yield and impact on treatment decision of stereotactic biopsy (SB) in elderly patients with unclear cerebral lesions. In this single center retrospective analysis we identified all patients aged ≥70 years receiving SB between January 2005 and December 2015. Demographic data, Karnofsky Performance Status (KPS), histology, comorbidity (by CHA2DS2-VASc Score) and use of anticoagulation were retrieved. We scrutinized diagnostic yield, procedural complications (mortality, transient and permanent morbidity), hospitalization time and therapeutic consequence. For correlation analysis Chi-Square, Mann-Whitney rank sum test and binary regression were used. Two hundred and thirty patients were included. In 229 patients SB was technically successful. Median age was 74 (70-87) years, 56.1% of patients were male and median preoperative KPS was 80% (30-100). Median CHA2DS2-VASc Score was 4 (1-9), with 29.6% receiving anticoagulation. Median hospital stay was 8 (2-29) days. Pathological diagnosis was conclusive in 97% revealing neoplastic lesions in 91.7% (high-grade glioma 62.6%, lymphoma 18.3%, metastasis 4.8%, low-grade glioma 3.0% and other tumors 3.0%) and non-neoplastic lesions in 5.3% of cases. Procedure-related mortality was 0.4%, transient and permanent morbidity occurred in 19 patients (8.3%) and eight patients (3.5%). Complication rate was not associated with any of the above-mentioned parameters. Adjuvant therapy was initiated in 171 (74.3%) patients. Decision against disease-specific therapy was only influenced by preoperative KPS (p < 0.001). SB in elderly patients is characterized by a favorable risk profile and high diagnostic yield, allowing tissue based therapeutic consequences even in patients with high comorbidity and anticoagulant medication.

KEYWORDS: Elderly; Neurooncology; Stereotactic biopsy

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