Abstract

Background: Aphasia, a neurological condition caused by left-hemisphere brain lesions, impairs language functions. Although lesion-linguistic deficit correlations are well documented in high-income countries, they remain understudied in resource-limited settings like Kenya where post-stroke rehabilitation is scarce. This study bridges this gap by analyzing lesion-symptom correlations in adults with aphasia, integrating clinical data with patient experiences. Methods: Using a mixed-methods correlational design, we assessed 36 aphasic adults from Tier four hospitals in Nakuru county, Kenyan healthcare system, selected via purposive and convenience sampling. Quantitative data was collected on lesion location using MRI/CT reports, and language deficits using standardized tests, and analyzed via chi-square tests and descriptive statistics to determine associations. Qualitative using semi-structured interviews with patients and clinicians, was thematically analyzed to identify recurring language impairment themes. Results: Brain lesion location strongly predicted the severity of aphasia symptoms ($\chi^2 = 18.24$, $*p* < 0.05$). Specifically, Broca's area lesions (38.9% of cases) correlated with expressive language impairments (agrammatism, reduced fluency), while Wernicke's area lesions (30.6%) linked to receptive language deficits (impaired comprehension, paraphasias). Global lesions (19.4%) caused mixed deficits. Variability in speech production despite similar lesion locations highlighted the `potential influence of cognitive reserve and premorbid language ability. Thematic analysis revealed syntactic disruptions, semantic retrieval struggles, and social isolation due to communication barriers. Clinical observations suggested positive impacts of early intervention and structured rehabilitation on language outcomes. Conclusions: This study confirms Broca's/Wernicke's lesion-deficit patterns in aphasia, supporting global psycholinguistic theories while revealing local rehabilitation disparities and offer valuable insights for clinical diagnosis and tailored rehabilitation strategies in Kenya. Findings underscore the need early, lesion-specific individualized speech therapy and assistive communication approaches to address the heterogeneity of aphasia symptoms to optimize recovery.