

Indicators of Ototoxicity in Adult Patients Receiving Chemotherapy

INTRODUCTION: In addition to the extensively studied platinum-based compounds, various other chemotherapeutic agents have been reported in the literature to exert ototoxic effects. Thus, auditory function monitoring in individuals undergoing chemotherapy (CT) has become an urgent concern. Distortion Product Otoacoustic Emissions (DPOAEs) constitute an objective examination method that enables the early detection of ototoxic damage to the auditory system. **OBJECTIVE:** To compare Distortion Product Otoacoustic Emission results before and after chemotherapy in adult patients undergoing different chemotherapy protocols. **MATERIALS AND METHODS:** This is a cohort study including 174 individuals who underwent chemotherapy between April 2022 and December 2023. All patients underwent DPOAE testing at frequencies ranging from 2 kHz to 12 kHz, both before and after chemotherapy. For comparative analysis, chemotherapy protocols were categorized into those containing platinum-based compounds (and their associated agents) and other protocols. **RESULTS:** A deterioration in response at least one frequency was detected in 157 individuals (90%). Of these, 87% received platinum-based chemotherapy, while 93% were treated with non-platinum-based regimens. Higher frequencies showed the greatest incidence of changes, consistent with findings reported in the literature. However, some degree of response decline was observed across all tested frequencies and protocols, a result that raises concern regarding the treatment of oncology patients. **CONCLUSION:** Chemotherapy demonstrated strong signs of ototoxicity in both platinum-based and non-platinum-based protocols. The high incidence of DPOAE alterations in adults undergoing chemotherapy underscores the importance of monitoring auditory function and raises an alert regarding the post-treatment quality of life in these patients.

Palavras-chave: Ototoxicity; Audiology; Chemotherapy

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