P425

SCREENING AND DIAGNOSTIC

Cisplatin-induced ototoxicity

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Abstract

A prospective descriptive study with inclusion of a cohort of old cases (retrospective data), involving 41 patients treated with cisplatin for 3 years from January 2021 to January 2024.

Only patients with pretreatment and post treatment tonal audiogram, no concomitant radiotherapy of the inner ear and ototoxic medication were selected. Descriptive statistics were used. A review of literature was performed using PubMed, with the keywords ototoxicity, cisplatin, platinum, hearing loss.

Of the 41 patients analyzed in our series, 33% presented hearing loss after treatment with cisplatin. This loss was high in males. Among these patients, 55% presented concomitant tinnitus. The hearing loss was sensorineural and frequently affected both ears with a predominance in high frequencies.

The incidence of hearing loss during treatment with cisplatin is high. carrying out a hearing check is essential in the presence of tinnitus which is highly suspicious of ototoxicity in these patients and should lead to a readjustment of the treatment if possible. The information in the literature is heterogeneous and imprecise.

Cisplatin chemotherapy can induce hearing loss and impact the quality of life of patients. In order to detect early and avoid worsening of this ototoxicity, monitoring by audiological examination before, during and after the end of cisplatin chemotherapy is mandatory. More studies are necessary to find solutions to reduce this ototoxicity.

Objectifs

-Obtaining epidemiological data from patients affected by cisplatin-induced ototoxicity.

-Measurement of induced hearing loss, the frequency of occurrence of tinnitus or its worsening in patients treated with cisplatin.

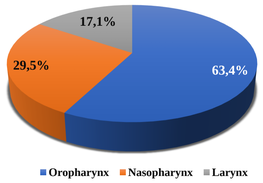
-Improvement of audiological monitoring of adult patients receiving cisplatin.

Méthodes et Matériels

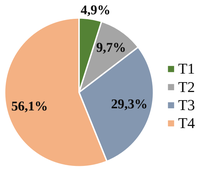
A prospective descriptive study with inclusion of a cohort of old cases (retrospective data), involving 41 patients treated with cisplatin for 3 years from January 2021 to January 2024. Only patients with pretreatment and post treatment tonal audiogram, no concomitant radiotherapy of the inner ear and ototoxic medication were selected. Before chemotherapy, they benefit from a complete audiometric assessment including a clinical examination, a preliminary pure audiogram from 250Hz to 8000Hz, tympanometry. Descriptive statistics were used. A review of literature was performed using PubMed, with the keywords ototoxicity, cisplatin, platinum, hearing loss.

Résultats

73.2% of the study population are male with a sex ratio = 2.7. The average age was 59.7 years. 39 patients (95%) have personal medical antecedents. In these histories, hypertension is found in 35.9% of cases, diabetes in 25.6%. 26 patients (approximately two thirds) have a tumor in the oropharynx, and 29% in the nasopharynx [picture 1]. 23 patients (56%) had a tumor (T4) and 12 patients (29%) had a tumor (T3) [picture 2]. 26 patients (approximately two thirds) had a normal otoscopy, 24,4% an otoscopic appearance suggestive of OSM and 12,2% had atelectasis. 68,3% of patients had a normal tympanogram, 21.9% a flat curve and 9.7% an offset curve. 56.1% of patients (n = 23) presented deafness. The deafness was sensorineural and frequently affected both ears with a predominance in high frequencies. About half reported tinnitus. The average cumulative dose of cisplatin (440.3 mg) [table 1]. Of the 41 patients analyzed in our series, a total of 56.1% (n = 23) presented hearing toxicity, 12.2% (n = 5) presented Grade 1 toxicity, 22% (n = 9) experienced Grade 2 toxicity, 22% (n = 9) experienced Grade 3 toxicity according to CTCAE v5.0. None experienced Grade 4 toxicity [table 2]..



Picture 1. Tumor location.



Picture 2. Tumor stage.

Otological signs	Effective	Frequency
Deafness	23	56,1%
Tinnitus	22	55,0%
Vertigo	3	7,3%

Table 1. Otological signs.

Auditory toxicity	Effective	Frequency
None	18	43,9%
Grade 1	05	12,1%
Grade 2	09	22,0%
Grade 3	09	22,0%
Total	41	100,0%

Table 2. Auditory toxicity.

Conclusion

Cisplatin chemotherapy can induce hearing loss and impact the quality of life of patients. Induced deafness is sensorineural, bilateral and irreversible, even when the hearing is stopped treatment. It is therefore essential in clinical practice for the practitioner to detect cochlear damage early in order to limit as much as possible the audiological impact on conversational frequencies through modifications to the treatment protocol.

Références

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