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(CASE REPORT)

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Esotropy revealing a recurrence of undifferentiated carcinoma of the cavum

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Abstract

Introduction: In Morocco, the incidence of cavum cancer remains high, estimated at around 3.8/100,000 inhabitants/year. However, ocular manifestations of this pathology remain rare, and can be revealing in certain cases.

Material and method: We report the case of a recurrence of undifferentiated carcinoma of the cavum revealed by right eye esotropia, in a 50-year-old woman, declared in complete remission for 1 year. Diagnosis was based on imaging and endoscopy associated with biopsy.

Discussion: Ophthalmic manifestations of cavum cancer are rare; they can be part of the clinical picture or sometimes even revealing the disease. Exophthalmos is often associated with diplopia. Oculomotor disorders are linked to the oculomotor nerves and muscles damages. The objectives of the ophthalmological examination are to evaluate the orbito-ocular extension and the contralateral eye visual acuity. Treatment is based on early radiotherapy which most often leads to improvement in visual and oculomotor impairment.

Conclusion: The ophthalmological signs in cavum carcinomas are due to a direct extension of the tumor at the level of the orbital apex and at the base of the skull. Radiotherapy improves the functional ocular prognosis.

Keywords: Cavum cancer; Ophthalmology; Esotropia; Recurrence; Ophthalmological revelation

1. Introduction

Nasopharyngeal carcinoma is highly frequent in the Mediterranean region [1], It is characterized by its deep location, which can invade the base of the skull, or by direct extension to the orbital region and cause damage to the cranial nerves [2]. This extension often occurs a few years after diagnosis, which explains why cranial neuropathy is rarely the revealing clinical picture. All cranial nerves can be affected, particularly the oculomotor nerves. Optic neuritis is exceptional; only a few cases have been reported in the literature [2], [3]. We report a case of a recurrence of nasopharyngeal carcinoma revealed by right eye esotropia. The work has been reported with respect to the SCARE 2020 criteria [4].

2. Observation

Miss R, 50 years old, with a history of cavum cancer treated in 2019 with radiotherapy – chemotherapy concomitant association, having at all 70 GY. the end of treatment was in September 2021 with total regression of the carcinoma. The follow up was regular and the last cervicofacial scan carried out in May 2022 shows a stable appearance of the thickening of the posterolateral walls of the cavum without progressive lesion.

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A month later, she attends our facility for an acute installation of right eye esotropia. Our clinical examination reveals an abduction deficit in the right eye without loss of visual acuity without other associated ophthalmological signs. the examination of the left eye was normal (fig.1 a, b).

Figure 1 Clinical symptoms showing right eye esotropia and abduction deficit

An Cranio-orbital MRI was performed in emergency and objectives a thickening of the cavum who is invading the base of the skull and invasion of the cavernous sinus. This was associated with filling of the sphenoid sinus with a thick frame that can explain the ophthalmological symptomology related to the invasion of the oculomotor nerve (fig.2).

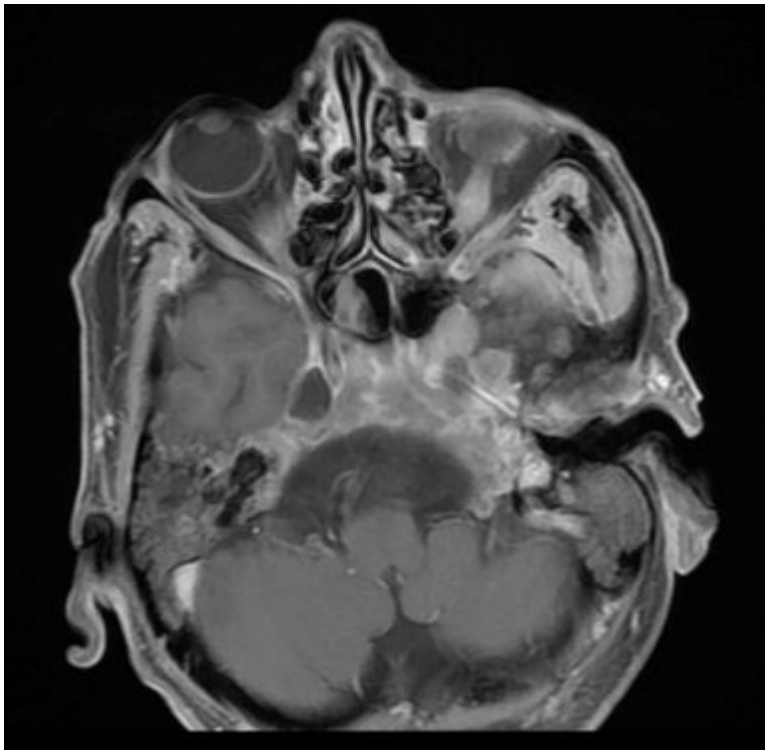

Figure 2 Brain MRI with sections on the cavum. T1-weighted sequence in axial sections: heterogeneous lesion of the right posterolateral wall of the cavum extending to the ipsilateral cavernous sinus and orbital region

Otherwise, there was an absence of abnormalities of the optic nerves and the optic chiasma. the orbital fat as well as the oculomotor muscles was safe that explain the preservation of visual acuity.

A nasal endoscopy was performed, and found a budding formation at the expense of the postero-superior wall of the cavum. A biopsy of this tumor objective the recurrence of the mean cancer than, the patient was referred to the oncology department where benefits of second line chemotherapy, followed by external radiotherapy and the progression was marked 1 year after the end of treatment by tumor regression.

3. Discussion

The incidence of cavum cancer is remaining frequent in Morocco, as in the rest of the Maghreb countries (5). It is estimated at approximately 3.8/100,000 inhabitants/year and represents 4.1% of all cancers declared in the Casablanca

region cancer registry (RCGC 2012 edition) and 2.5/100,000 inhabitants/year according to the register of cancers in Rabat (5).

Men are more frequently affected than women with a sex ratio varying between 2 and 3 (6-7-8).

Its diagnosis is often late because the symptoms are varied and non-specific, the picture is sometimes difficult to interpret when it is related to invasion of nasopharynx adjacent' s structures.

Most Cavum cancers are classically revealed by otological or rhinological signs. Cervical Lymphadenopathy are present in 40% of cases. Otherwise, the Ophthalmological signs can be a part of the clinical features and sometimes be revealing the disease. The orbital invasion can be explained by the deep and infiltrative nature of this cancer which can extend intracranially, towards the base of the skull or spread forward and invade the orbital region. this situation remains very rare, it was about 3% among of cavum cancer in the recent publications (9).

The ophthalmological examination must be bilateral, complete and in order to look for exophthalmos related to an intra-orbital expansive process. It is associated with diplopia (10).

The oculomotor disorders are also reported due to the compression or ischemia of the oculomotor nerves and muscles. The external oculomotor nerve is frequently affected (26%).

Involvement of the optic nerve is very rare and exceptionally revealing, it often occurs after a few years of progression and results in a decrease visual acuity. The assessment of orbital extension is based first on CT scan that is a low cost, available and reproducible technique, relatively easy to perform and interpret and with a short examination time. It allows the analysis of both bony structures and soft tissues and an evaluation of regional cervical lymph node extension (1).

MRI still the technique of choice, offering the best tissue contrast. its contribution is significantly greater than that of CT in the evaluation of the perinerve extension, parapharyngeal spaces, the base of the skull and deep spaces of the face, the endocranium, and the bone marrow (2-3).

Endonasal Biopsy confirms the diagnosis and specifies the histological type, preferably carried out after the radiological assessment. Malignant epithelial tumors represent more than 90% of nasopharynx cancers. The WHO classification, based on the degree of differentiation, si the most used (WHO 1: keratinizing squamous cell carcinoma, WHO 2: non-keratinizing squamous cell carcinoma, WHO 3: undifferentiated carcinoma of the nasopharyngeal type (UCNT) [4] . Other types are rarer, namely adenocarcinomas, salivary gland tumors, lymphomas or others. The treatment is based on the combination of radio-chemotherapy. The most redoutable complication is the post-radiation blindness. The place of surgery in this situation is very limited and concerns only the sequelae lesions.

Extension to the cranial nerves as well as the orbit represents a poor prognosis factor. With a 5-year survival not exceeding 28%. The duration of progression before treatment constitutes the main prognostic factor (nerve suffering from hypoxia and microvascular lesions).

4. Conclusion

Cavum cancer presents a particular progressive profile. The ophthalmological involvement can rarely reveal the disease. The prognosis is directly related to the deep and duration of evolution. Blindness post radiotherapy is the most regrettable complication.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of ethical approval

I declare on my honor that the ethical approval has been exempted by my establishment.

Statement of informed consent

Written informed consent for publication of their clinical details and/or clinical images was obtained from the patient.

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