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Nasopharyngeal Cancer with Ophthalmic Revelation: About Three Cases

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Authors' contributions

This work was carried out in collaboration among all authors. Author AR designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author AR managed the literature searches. All authors read and approved the final manuscrip.

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Case Study

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ABSTRACT

Nasopharyngeal carcinoma is a major problem in Maghreb. Diagnosis difficult and often at a late stage, this tumor has benefited from the technical progress of radiotherapy. In the stages of complications it can be revealed by ophthalmological manifestations including oculomotorpalsy, papillaryedema or exophthalmia In our series we report three cases of patients with cavumtumors revealed by a papillary edema for the first one, exophthalmia for the second and oculomotorparalysis for the third.

Keywords: Nasopharyngeal cancer; exophtalmia; papillary edema; oculomotor paralysis.

1. INTRODUCTION

Cavum cancer is a common pathology in Morocco and the Mediterranean basin. Diagnosis is usually made late, due to its clinical presentation and its deep location with misleading clinical manifestations [1].

Ophthalmological involvement rarely occur and reflects a late stage of the disease.

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We report three cases with a cavum tumor and ophthalmological complications. Clinical data, computed tomography and follow up examinations were collected.

2. CASE REPORT

2.1 Case 1

- 36 years old patient, who presented Intermittent headache with decreased visualacuity in both eyes without diplopia, and without rhinological sign.
- The ophthalmological examination finds:
  - Visualacuity with correction to 3/10 in right eye and 1/10 in left eye.
  - abolition of the photomotor reflex
  - Fundus examination revealed bilateral papillaryedema grade I (Fig. 1).
- A cerebral MRI was requested and revealed a tumor process centered on the base of the skull, poorly bounded irregular contours, isodense, Heterogeneous enhancement after injection of contrast measuring 50*42mm (Fig. 2).
- A rhinocavos copy was performed, and found a discreet bulging of the wall upper and lateral cavum.
- A biopsy performed under endoscopic control revealsan in filtrant differentiated carcinoma.
- The patient is currently on chemotherapy, and radiotherapy is planned.

2.2 Case 2

- 13-year-old patient who consulted for a bilateral exophthalmia associated within flammatory signs and decrease in visualacuity, without rhinorrhea, epistaxis or other associated signs.
- The clinical examination found:
  - Visualacuity limited to light perception in right eye and count the fingers closely in left eye.
  - An axillary and non-reducible painful bilateral exophthalmia complicated by keratitis and chemosis (Fig. 3).
- MRI showed a rhinopharyngeal process with orbital invasion (Fig. 4).
- At nasal endoscopy, we find a budding formation at the expense of the wall postero-superior of the cavum.
- A was performed and histopathological examination revealed an un differentiated nasopharynx carcinoma (ucnt).

The patient is then referred to the oncology department whereneo-adjuvant chemotherapy was prescribed, relayed by external radiotherapy.

2.3 Case 3

- 36-year-old patient, admitted for developing intermittent diplopia.
- Interrogation reveale dasthenia associated with night sweats, and hemi-cranialheadache, without any rhinological sign.
- The ophthalmological examination has objectified:
  - Limitation of the abduction of the right eye with a homonymous lateral diplopia(Fig. 5)
  - Visual acuity was conserved in right and left eye.
- The examination of the ganglionic areas objectified a right lateral cervical ADP.
- Examination of cranial pairs revealed right jugal hypesthesiaat the level of territory of V2.
- Radiological assessment:
  - CT: important filling of the cavum infiltrating the parapharyngeal greasy spaces associated with bilateralsphenoidal and maxillarysinus it is with condensation of right mastoidcells, associated with osteolytic slesions of the clivus and left sphenoid wing(Fig. 6)
- A biopsy performed under endoscopic control: revealed an undifferentiated carcinoma of the nasopharynx (UCNT).
- The patient was referred to the oncology department where he received radio chemotherapy.
- The evolution was marked by the installation of a non-axillaryexophthalmos, a limitation of the elevation of the OD, as well as the development of a post-radiation keratitis.

3. DISCUSSION

The global incidence of cavum cancer is geographically dependent, ranging from

2/100,000 / year in low endemic areas, to 30-80 / 100,000 / year in high endemic areas[1,2].

It is a common pathology in Morocco [3], it occurs at any age and reaches preferentially the man [4].

It's diagnosis is often late because hissymptomatology is rich, but not specific, can be misleading and sometimes difficult to interpret when it is related to an invasion of structures close to the nasopharynx [5].

Fig. 1. Fundus case 1: bilateral stage 1 papillary edema

Fig. 2. Case n ° 1. cerebral CT: avoluminous tumoral process interesting the different walls of the cavum and invading the base of the skull

Fig. 3. Case 2: bilateral exophthalmos with inflammatory signs and chemosis

Fig. 4. Case 2: MRI showing a voluminous tumoral process of the cavum locally advanced with endocranial extension

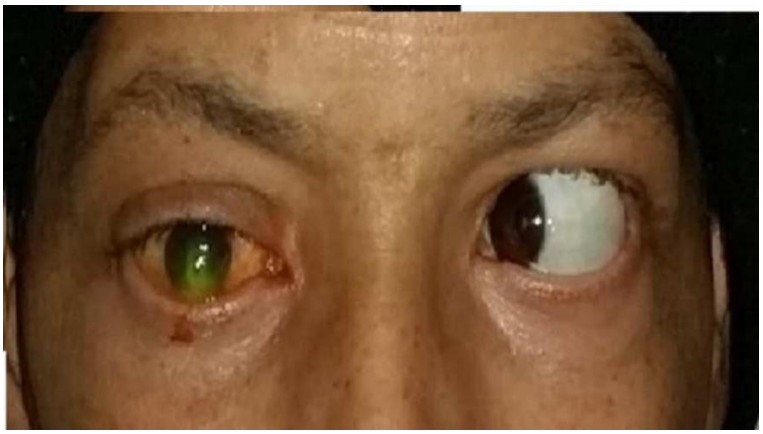

Fig. 5. Limitation of the abduction of the OD (patient looking to the right)

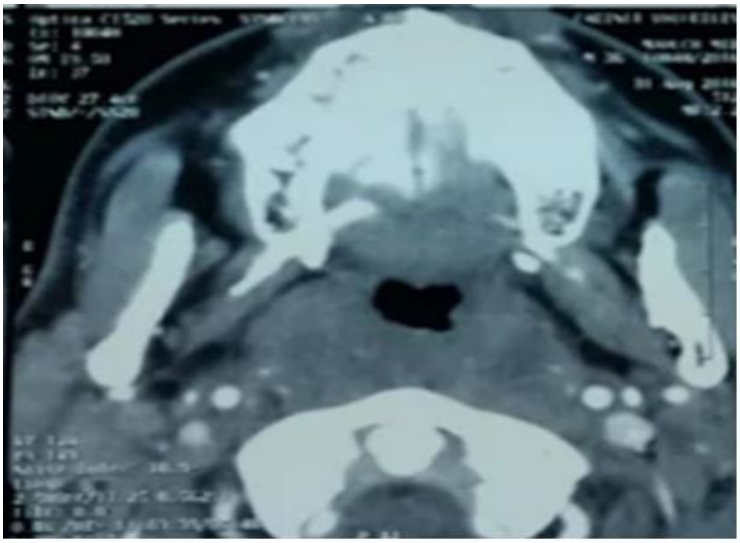

Fig. 6. CT scan showing cavum infiltration

Cavum cancer is conventionally revealed by otological: hypoacusis, tinnitus, rhinological signswith nasal obstruction, epistaxis and anosmia [5].

Cervical lymphadenopathies are revealing in 40% of cases.

Ophthalmological signs may be part of the clinical sign and are sometimes revealing.

Orbital involvement is explained by the deep and infiltrating nature of this cancer that can extend up 3intracranial, towards the base of the skull or spread forward and invade the orbital region [6].

Exophthalmia is usually nonaxile and often associated to a diplopia. Oculomotricity disorders are also observed during invasion, compression or ischemia of the nerves and oculomotor muscles.

The compression or invasion of the optic nerve is very rare, it often occurs after a few years of evolution [7].

The assessment of orbital-scaletumorsis based first on CT in axial and coronal sections.

It specifies compression or invasion of bone structures and orbital contents (oculomotor muscles, optic nerve, eyeball). Finally, it allows to measure accurately exophthalmia and ocular displacement.

MRI in axial, coronal and sagittal sections allows to locate the lesion, to specify iner relationships with orbital content and meningo-encephalic structures, and refine the etiological diagnosis especially after gadolinium injection [7].

The biopsy, performed preferably after CT-MRI, by the endo nasal way, confirms the diagnosis and specifies the histological type [8].

The treatment is based on concomitant radio-chemotherapy, which the main problemis post-radiation blindness. The place of surgery is very limited and only concerns the sequellar lesions [9].

The prognosis is gene rally poor. The extension to the cranial nerves as well as to the orbit represents a factor of bad prognosis.

4. CONCLUSION

Isolated visual impairment in cavum cancers remains exceptional. It is often late and delays diagnosis that remains based on imaging (CT / MRI). The treatment is based on the radio-chemotherapy combination. The prognosis remains bad, according to most authors.

CONSENT

As per international standard or university standard, patient's consent has been collected and preserved by the authors.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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