

A SKULL BASE EXTENSION OF A NASOPHARYNGEAL CANCER TREATED AS LYMPH NODE TUBERCULOSIS: CASE REPORT

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ABSTRACT

Introduction: The incidence of nasopharyngeal cancer (NPC) is about 0, 5-2/100 000/year in the low endemic areas, 30-80/100 000/year in the high endemic areas. There is no etiological agent well defined. The Epstein Barr virus is usually found in undifferentiated carcinomas but the pathogenesis is not well established to date. Radiotherapy is the first line of treatment of non disseminated nasopharyngeal cancer.

Case presentation: We report a case of 23 years old young boy with past medical history of amygdectomy who presented left latero cervical poly adenopathy, the cytopunction with thin needle was in favour of lymph node tuberculosis. Anti tuberculosis treatment was started even though there was no confirmation of tuberculosis by other laboratory investigations. Because of the persistence of the symptoms and the apparition of rhinologic signs associated with a bulge of the velum. A CT scan was performed objectifying a tumoral process of left postero lateral part of naso pharynx and also multiples bilateral latero cervical micro lymph node. A second CT scan showed a huge necrotic tissular expansive process of the rhino pharynx, extending to the oropharynx and crossing the pharyngo basilar fascia invading the skull base with a probable extension to the pre pontic cistern, the masticatory spaces. There are also necrotic bilateral cervical lymph nodes with the presence of suspected left subclavicular lymph nodes. It is classified T4 N3b M0. The histology showed a nasopharyngeal carcinoma type UCNT; the patient was referred for chemo radiotherapy.

Conclusion: The nasopharyngeal cancer is a rare tumor; the diagnosis is usually made at an advanced stage.

Keywords: Cancer Nasopharyngeal, Radiotherapy, Chemotherapy

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INTRODUCTION

The Nasopharyngeal carcinoma (NPC) is a rare malignant tumor arising from epithelial cells of the nasopharynx. Its incidence depending on the geographic location is highest in South East Asia. The age distribution of NPC is bimodal, with one peak arising in young adolescents and another one in patients between 55 and 59 years of age (Chang and Adami, 2006). The Epstein Barr virus is usually found in undifferentiated carcinomas but the causality is not well established to date. Radiotherapy is the first line of treatment of non disseminated nasopharyngeal cancer. Here we report the case of a 23 years old patient who presented a naso pharyngeal mass treated initially for lymph node tuberculosis before the immune histo chemical exam raised the diagnosis of nasopharyngeal malignant tumor and the CT scan objectified the extension to the skull base.

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CASE

We report the case of 23 years old boy with past medical history of amygdalectomy who consulted at the ENT department of Maradi Regional hospital for nasal obstruction, a posterior purulent rhinorrhea, dysphasia evolving since 6 months; one month before the consultation he presented a rhinolalia and left laterocervical lymph nodes.

At the admission the clinical exam found a patient with a bad general health status, an opacity of the left tympanum and a bulge of the velum; the posterior rhinoscopy with laryngeal mirror turned toward the cavum visualize an ulcero budding mass. The palpations of nodes areas found two left spinal lymph nodes which are tough, mobile and painless. The cyto puncture with thin needle was carried out and the cytology was in favour of lymph nodes tuberculosis; so the reason to start an anti tuberculosis treatment according to the national protocol. In front of the persistence of the symptomatology and instead of the anti tuberculosis treatment a laryngo pharyngeal CT scan was performed objectifying a huge tumoral process of the soft part of pharynx in left postero lateral side measuring 48mm x 68mm x 91mm. It is a huge necrotic tissular expansif process of the rhinopharynx and the oropharynx crossing the pharyngo basilar fascia, envading the skull base with a probable extension to the pre pontique cistern and envading the masticatory spaces; there were necrotic bilateral cervical lymph nodes with the presence of suspects left sus clavicular lymph nodes (Figure 1). It is classifying T4 N3b M0.

Many bony lesions were identified (Figures 2) like an important lysis of the clivus, with presence of a bone defect inside it; a bone defect of the sphenoid sinus, a bone erosion of the wall of the carotidian canal. After a biopsy of the mass the histological examination found: the CD3 marqued some scattered small elements, the anti body CD20 showed a frankly marquage of lymphoides B sprinkling tumoral tablecloths.

The cytokeratin marqued frankly and strongly the tumoral cells at 80%. The immunohistochemical profile is for a nasopharyngeal carcinoma type UCNT. The patient was referred for chemotherapy and radiotherapy. Before the beginning of the chemotherapy the assessment of extension carried out was normal. This assessment included a full body scintigraphy, abdomino pelvic ultra sound, a chest X ray a thoraco abdomino pelvic CT scan.

The first chemotherapy was given in 3 cycles according to the protocol 5 FU-CDDP. The conformational radiotherapy 3D by intensity modulation with linear accelerator (VERSA HD), for total dose of 70GY: fraction 2GY/session and 5 session / week. The volume delivered were: for the nasopharynx and extensions 70 GY, cervical lymph nodes involved at the first time 66-70 GY, cervical lymph nodes not envaded 54-59,4 GY; The patient presented toxicity signs like dysphasia, mucitis resolved with medical treatment.

One year after radiotherapy the evolution was marqued by a good clinical outcome, no dysphasia, total disappearance of cervical lymph nodes.

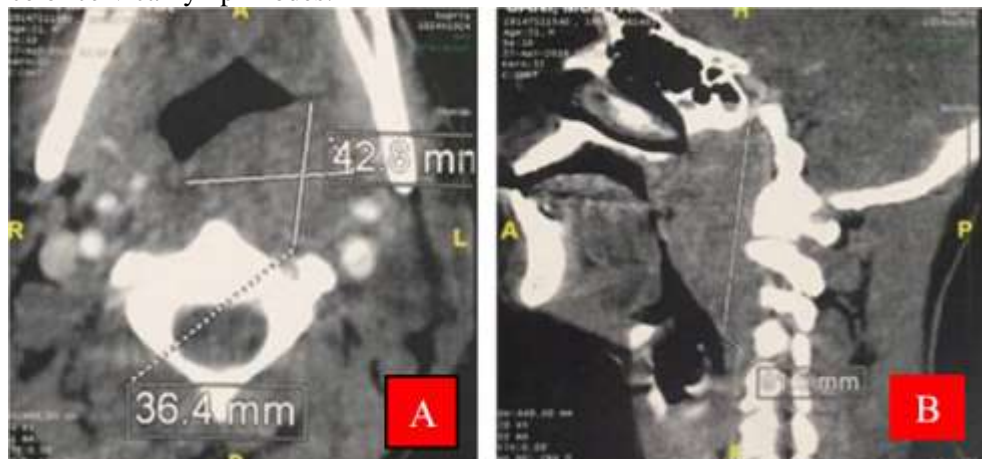


Figure 1: Laryngo pharyngeal CT objectifying a huge tumoral process of the soft part of pharynx in left postero lateral side measuring 48mm x 68mm x 91mm; (A: axial; B: sagittal).



Figure 2: Craniocervical CT Scan: Many bony lesions, an important lysis of the clivus, with presence of a bone defect inside it; a bone defect of the sphenoid sinus, a bone erosion of the wall of the carotidian canal. (A: sagittal, B: axial)

DISCUSSION

Nasopharyngeal carcinoma is a cancer arising from the nasopharynx epithelium. Within the boundaries of the nasopharynx, the tumour epicenter is frequently seen at the fossa of Rosenmuller, from where the tumour invades adjacent anatomical spaces or organs. Despite being of a similar cell or tissue lineage, distinct differences exist between nasopharyngeal carcinoma and other epithelial tumours in the head and neck region (Chua *et al.*, 2016). Worldwide, 86 500 cases of nasopharyngeal carcinoma were reported in 2012, accounting for only 0.6% of all cancers diagnosed in that year. 71% of new cases were in east and southeast parts of Asia, with south-central Asia, and north and east Africa accounting for the remainder (Ferlay *et al.*, no date). The age distribution of NPC is bimodal, with one peak arising in young adolescents and another one in patients between 55 and 59 years of age (Chang and Adami, 2006). Etiologic studies have demonstrated that NPC follows a multistep process, in which Epstein-Barr- Virus (EBV), ethnic background and environmental carcinogens seem to play an important role (Chua *et al.*, 2016; Raab-Traub, 2002). In South East Asia environmental factors such as the consumption of certain herbs, salted fish and smoking have been described to be associated with an increased risk for NPC (Guo, 2009). In addition, genetic factors, indicated by the occurrence of familial cases, association of NPC with certain HLA-subtypes and polymorphisms in host innate immune sensor genes influence the predisposition for this tumor. The clinical expression is characterized by a rhinologic syndrome, an otologic syndrome and neurological signs associated to a loco regional lymph nodes invasion (Hasbini *et al.*, 2000) as our patient presented but the cytology after cyto puncture with thin needle was in favour of lymph nodes tuberculosis; for that reason he was treated initially for lymph nodes tuberculosis before the immune histo-chemical exam raised the diagnosis of nasopharyngeal malignant tumor and the CT scan objectified the extension to the skull base. In this case the tumor is diagnosed at an advanced stage; it is not possible for us to achieve total resection so we just performed a biopsy of the mass which permit us to have a histological diagnosis.

As NPC is a radiosensitive neoplasm and tumors are usually not amenable to complete surgical excision due to their location, radiotherapy has been traditionally the treatment of choice. Several randomized trials over the last 20 years have shown a benefit for concomitant radiochemotherapy in loco regionally advanced disease in adults with regards to overall survival, event-free survival and relapse rate (Baujat *et al.*, 2006). The dosage received by our patient is similar to the dosage advocated by many authors; for Saleh-Ebrahimi *et al.*, (2013) the radiation dosages of around 70 Gy to the primary tumor and 50 Gy to the lymph nodes are considered as standard in adults; combinations of

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cisplatin and 5-fluorouracil are mostly used for chemotherapy. With this concept 5-year progression free survival rates of about 70 % have been achieved. For the reported case concomitant to radiotherapy, chemotherapy was given in 3 cycles according to the protocol 5 FU-CDDP. Even if the patient presented some light toxicity signs resolved with medical treatment one month after radiotherapy the evolution was marked by a good clinical outcome, no dysphasia, total disappearance of cervical lymph nodes. After a study reporting the clinical outcomes of 3328 patients with NPC treated in the modern era of Hong Kong, Au *et al.*, concluded that intensity modulated radiotherapy (IMRT) is an effective radiation treatment achieving high rate of locoregional control for NPC and concurrent chemo-irradiation with cisplatin had an established role in NPC patients treated with IMRT (Au *et al.*, 2018). About 95 % of patients are diagnosed with locally advanced stages. For these patients a therapy concept with neoadjuvant chemotherapy, followed by radiochemotherapy and subsequent maintenance therapy with interferon- β has not only proved to show the highest overall and event-free survival rates (> 90 %), but also to use the lowest dosages of radiotherapy (Kontny *et al.*, 2016).

CONCLUSION

The nasopharyngeal cancer is a rare tumor; the diagnosis is usually made at an advanced stage. A concomitant chemotherapy in addition to radiation is an effective way to improve the overall survival in NPC. The extension to the skull base of the NPC can lead to raise the diagnosis of other lesions.

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