



An Exceptional Case of a Duodenal Metastasis from a Nasopharyngeal Carcinoma

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Abstract

Nasopharyngeal Carcinoma (NPC) is a common head and neck cancer. The involvement of the digestive tract is exceptional. Herein we report the case of a 32-year-old man who initially presented with a T3N3M0 NPC according to the 7th edition of American Joint Committee on Cancer (AJCC) Tumor/Node/Metastasis (TNM) classifications. The patient had a complete response after a treatment based on radiotherapy and concomitant chemotherapy. Fifteen months later, he presented with digestive symptoms. After explorations, radiological and histological findings concluded to a duodenal relapse of his NPC. To our knowledge, this is the first case of a duodenal metastasis of a NPC reported in the literature.

Keywords: Nasopharyngeal carcinoma; Metastasis; Digestive tract; Duodenum

Introduction

Nasopharyngeal Carcinoma (NPC) is a common endemic head and neck cancer in Southern China and Southeast Asia. Intermediate incidences are seen in the Mediterranean Basin and the Arctic. Distant metastasis is observed in 18% to 50% after conventional treatment [1]. The most affected metastatic sites are bones, lymph nodes, lungs and liver. Gastrointestinal metastases are extremely rare. To the best of our knowledge, this is the first case of duodenal metastasis from NPC.

Case Presentation

In April 2016, a 32-year-old man with no previous medical history attended the Department of Otolaryngology at the Salah Azaïez Institute with a laterocervical mass that had gradually increased in volume since 3 months. A biopsy of the mass has been achieved. Histological findings concluded to a lymph node metastasis of an undifferentiated nasopharyngeal carcinoma. Head and neck Computed Tomography (CT) showed voluminous right cervical nodes. Endoscopic evaluation revealed a nasopharyngeal swelling which biopsy concluded either to a non-keratinizing undifferentiated nasopharyngeal carcinoma. According to The 7th edition of American Joint Committee on Cancer (AJCC) Tumor/Node/Metastasis (TNM) classification and prognostic stage groups for nasopharyngeal cancers, the tumor was classified into T3N3M0. The case was discussed at a multidisciplinary team meeting. The decision was to make 3 cycles of 5FU and platinum based chemotherapy (5FU-cisplatin) followed by concurrent chemotherapy (weekly Cisplatin) and external beam radiotherapy. After achieving his treatment, the patient had a complete clinical and radiological response. Fifteen months later, he presented to the Institute with an epigastric pain. Endoscopy showed an ulcero-budding mass infiltrating the duodenum. Biopsy of the mass was performed. Histological findings concluded to a metastatic poorly differentiated carcinoma of a nasopharyngeal origin. A whole body CT scan showed multiple intra- and retroperitoneal enlarged lymph nodes. The lesion was not respectable. Given the very good initial response to Cisplatin, the unavailability in our country of effective target therapy or check point inhibitors and the recurrence of the disease after an interval of more than 6 months after Cisplatin based chemotherapy; it was decided to reintroduce Cisplatin. The patient received 5 FU Cisplatin as a first line chemotherapy. Unfortunately, he died after achieving 2 cycles of chemotherapy because of an acute intestinal obstruction.

Discussion

Nasopharyngeal Carcinoma (NPC) is a common head and neck cancer. North Africa is an intermediate area of incidence. It remains curable despite of its high malignancy. The incidence of metastases was 51% among 63 cases of NPC autopsies in the series reported by Ahmad A et al.

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Table 1: Clinical features of 5 cases of digestive tract metastases of nasopharyngeal carcinoma.

Authors	Sex/Age	TNM Staging	Initial Treatment	Metastatic sites of recurrence or progression and TTP	Treatment of recurrence/Progression	Outcomes
Suppiah et al. [6]	M, 64	T2N1M0	RT	Rectum, liver, spleen, aortic and porta hepatic, lymph nodes: 11 months after treatment	No treatment	PFS and OS 11 months
Lau et al. [8]	M, 58	T2bN2M0	Concurrent CRT with weekly Cisplatin	Distal small bowel: 8 months after treatment	Resection of the lesion followed by three cycles of combination CT with paclitaxel and carboplatin Second line CT: Capecitabine Third Line CT : Gemcitabine	Remained responsive to further lines of chemotherapy
Lahuri et al. [9]	M, 61	T1N0M0	Concurrent CRT with weekly Cisplatin	Ascending colon: 19 months later	Right hemicolectomy	One month after surgery: Metastasis: bilateral supraclavicular nodes, lungs, liver and adrenal gland (Died 2 months later) OS 22 months
Vogel et al. [7]	M, 65	T3N3bM1 (Lungs and bones)	RT	Adrenal glands, Th10-Th11 epiduritis and peritoneal carcinomatosis: After achieving RT Rectum: 1 year after diagnosis	Radiation therapy of epiduritis	OS 13 months
Meddeb et al. 2018	M, 32	T3N3M0	Three cycles of 5Fu Cisplatin induction CT followed by Concurrent CRT with weekly Cisplatin	Duodenum: 15 months after treatment	First line 5FU and Cisplatin based CT	PFS 15 months OS 20 months

M: Male; RT: Radiotherapy; CT: Chemotherapy; CRT: Chemotherapy and Radiotherapy; PFS: Progression Free Survival; OS: Overall Survival



Figure 1: Endoscopy of digestive: budding mass of duodenum.

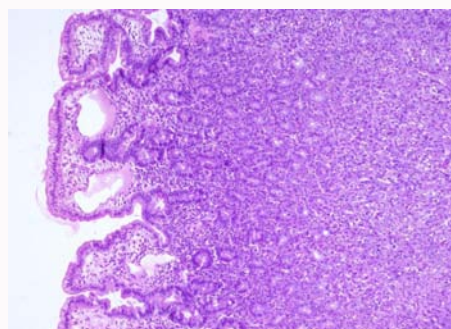


Figure 2: Biopsy of the mass: at low magnification, the tumor cells are inserted between the residual glands.

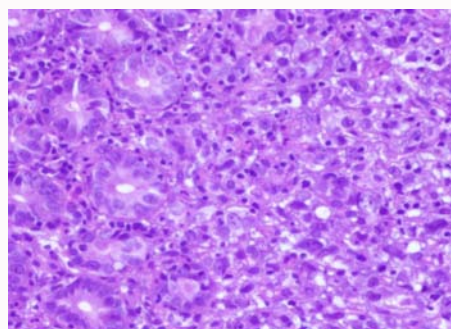


Figure 3: Biopsy of the mass: at high magnification, the tumor cells have strongly nucleated nuclei and a reduced cytoplasm.

[2] metastatic sites are bones (65.9%), lungs (26.9%), liver (30.7%) and distant lymph nodes (28.5%). Due to its high radio-sensitivity, radiotherapy is considered as the standard of care in almost all cases of local NPC. Five-years reported Overall Survival (OS) rate after radiotherapy is 87% to 96% for stage I-II and 67% to 77% for stage III-IVB [3]. Chemotherapy is combined with radiation therapy in order to enhance the radio-sensitivity of the tumor and therefore to reduce the risk of local and distant relapse. The incidence of distant metastases is higher when there is nodal involvement, jugular vein invasion or extensive soft tissue disease [4]. Malignant involvement of the digestive tract is usually related to a primary digestive tumor or contiguity by another organ affected by the disease. Secondary metastases of digestive tract are exceedingly rare. Rare metastatic sites of NPC has been reported in the literature (2.4%), such as the spleen, kidneys, pleura, breast, abdominal wall and thyroid gland [5] but NPC has never been reported so far. To the best of our knowledge, only 4 cases of digestive tract metastasis of nasopharyngeal carcinoma have been published until now. Our case represents the fifth. All cases reported to date are males between 32 and 65 years of age. The first case has been published by Suppiah et al. in 2006 [6]. It

was about rectal metastases. A second case of rectal metastasis has been published by Vogel et al. [7], Lau et al. [8] described a case of a distal small bowel metastasis occurring 8 months after a treatment by concurrent chemo radiation therapy. One case of ascending colon has been reported in 2015 by Lahuri et al. [9] (Table 1). This is the first

case of nasopharyngeal duodenal metastasis. Regarding treatment, platinum-based chemotherapy is considered to be the preferred regimen for first-line treatment of recurrent NPC. Second line Capecitabine, gemcitabine or Docetaxel based monochemotherapy is recommended in case of Platin resistance or in non-eligible patients for Platinum [10]. Checkpoint inhibitors such as Pembrolizumab, an anti-PD1 agent, showed remarkable results in advanced multitreated NPC with response rates of 26% [11]. Unfortunately they are not available in our country.

Conclusion

The occurrence of digestive tract involvements of a NPC is relatively uncommon. In spite of their scarcity, a prompt recognition and treatment are mandatory. According to the few cases reported in literature their prognostic seems to be bleak.

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