Attitude towards the patient with a nasopharyngeal mass – Differences in the ENT doctor's approach in Portugal

Original Article

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Abstract

Aim: The nasopharynx is an anatomical region where diverse tumors arise. They are mostly benign, with the most common malignant one being carcinoma, followed by lymphoma. Nasal endoscopy with biopsy is the gold-standard in the diagnosis of these lesions. The aim of this study was to evaluate the differences in each ENT doctor's approach in two different clinical cases of patients with a nasopharyngeal mass.

Material and Methods: Release of an online questionnaire with two different cases of patients with a nasopharyngeal mass and their respective endoscopy, comprising 3 questions for each case about each individual doctor's approach to the patient.

Results and Conclusion: Despite knowing that all suspicious lesions should be biopsied, there was no consensus in the participants of this study on the approach to these patients, neither as to what for them defines a mass as suspicious nor the timing at which they would request imaging complementary studies.

Keywords: nasopharynx, endoscopy, biopsy, nasopharyngeal carcinoma

Introduction

The nasopharynx is the uppermost region of the pharynx, located in its postero-superior wall, posterior and superior to the soft palate. It is covered by mucosa and is rich in lymphoid tissue, which is why several masses, both benign and malignant, originate in this anatomic area. The most common condition is benign adenoid hypertrophy, which usually resolves in adolescence, although it may persist and become the main cause of nasal obstruction in some adults.[1] The most common malignant neoplasm is carcinoma of the nasopharynx, followed by lymphoma.[2]

Patients with these tumors usually have nonspecific complaints such as nasal

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obstruction, epistaxis, sensation of ear fullness, and up to 50% of patients are asymptomatic until they reach more advanced stages. [1,3] The last epidemiological study conducted in Portugal on carcinoma of the nasopharynx showed that the most common complaint was neck swelling (51.6%), followed by nasal (24.2%) and ear (23.3%) symptoms.[4]

Despite the technological advances and high sensitivity of imaging exams for malignancy, nasal endoscopy continues to be the main initial investigation for these masses, and the definitive diagnosis always depends on biopsy.[3] The latter can be performed during consultation under local anesthesia in most cases, is well tolerated, and has few risks. Therefore, there is consensus in the literature that biopsy should be performed in all suspicious lesions. It is relatively easy to consider an advanced stage lesion (for example, large, asymmetrical, irregular, hemorrhagic) suspicious.[3] Thus, the role of the otorhinolaryngology (ORL) specialists is to detect these malignant lesions at an early stage to improve the prognosis and survival of patients.[3]

This study aimed to evaluate the differences in the approach of ORL specialists to nasopharynx masses by assessing both the differences among specialists and clinical cases managed by the same specialist. Therefore, we presented two clinical cases, one of whom was deemed extremely suspicious because it was an irregular, friable mass that was causing epistaxis, while the other was deemed not very suspicious because it was a regular, symmetrical mass with no symptoms. Subsequently, we questioned the respondents about their performance in terms of performing a biopsy, requesting imaging exams, treatment decisions, and which factors would change their performance. The objective was to understand the differences between the approaches of ORL specialists and what they consider suspicious in a nasopharyngeal lesion.

Materials and Methods

We nationally released an online questionnaire pertaining to two clinical cases with a mass in the nasopharynx.

Clinical case 1 was a 40-year man presenting with intermittent epistaxis and a nasopharyngeal mass with an irregular and friable surface, whose nasal endoscopy image is shown in Figure 1. Clinical case 2 was a 35-year-old asymptomatic woman, who had a regular and symmetrical mass that was incidentally detected in a computed tomography (CT) scan with no other relevant changes. Her nasal endoscopy image is shown

Figure 1
Nasal endoscopy image of clinical case 1

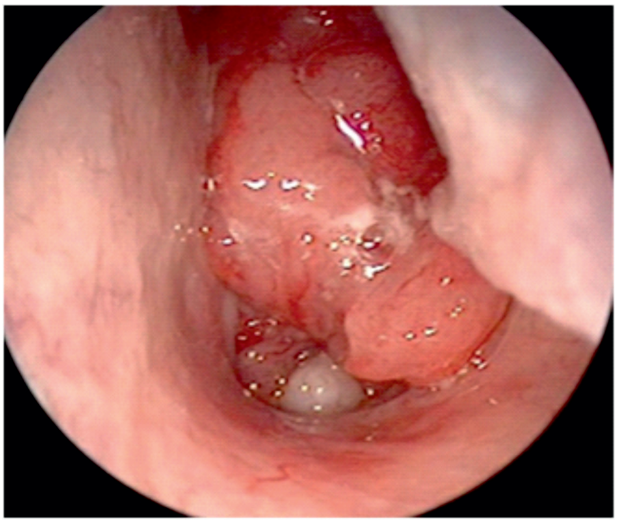
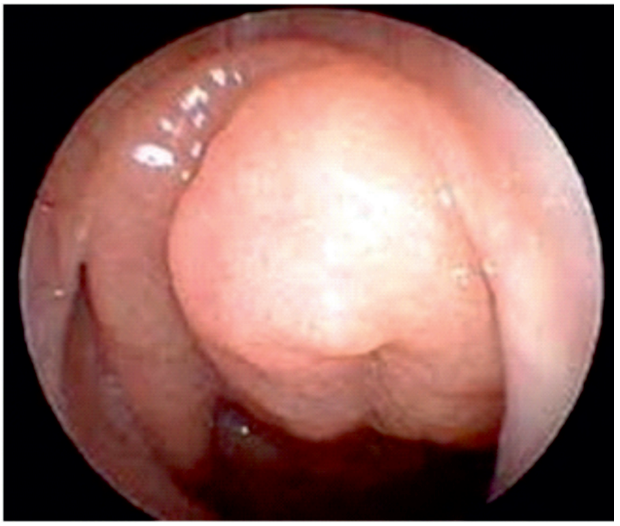


Figure 2
Nasal endoscopy image of clinical case 2



in Figure 2. No report or images of this CT were made available, only the above description.

The released questionnaire contained three questions for each clinical case (Table 1).

Statistical analysis was performed using IBM SPSS Statistics for Windows, Version 28.0 software, and the chi-square test was used to investigate the differences in the frequency between answers. Statistical significance was set at $p<0.05$.

Results

A total of 143 Portuguese ORL physicians participated in the study. Their distribution regarding graduation, gender, type of institution, and region of the country where the participants work is summarized in Table 2. In clinical case 1, 54.5% of the participants would immediately perform a biopsy. Of these, 97.6% participants would simultaneously order imaging tests with the biopsy, and only 2.4% would wait for the histological result before ordering. The remaining 45.5% would not perform a biopsy immediately. Of these, 97.1% would first request an imaging exam before considering it, and the remaining 2.9% would not request complementary exams and would only reassess with a new endoscopy after one month.

In clinical case 2, 39.2% of the participants would perform a biopsy immediately. Among the 60.8% of participants who would not immediately perform a biopsy, the most common therapeutic attitude (60.9%) was the administration of topical corticosteroid therapy and reassessment after one month, with a biopsy if the mass remained the same (Figure 3). The presence of synchronous cervical swelling (92.1%), asymmetric mass (69.7%), and ear fullness/otitis media with effusion (60.5%) were the main factors that would cause the participants to change their

Table 1
Contents of the questionnaire released online

Clinical case 1	Clinical case 2
1.1. Would you perform a biopsy immediately? - Yes - No	**2.1. Would you perform a biopsy immediately?** - Yes - No
1.2 If you answered YES to question 1.1, what would you do regarding a request for CT and/or MRI for this patient? - Request them at the same time as the biopsy - Only request them after having a biopsy result - I would not request them	**2.2. If you answered NO to question 2.1, what would you do for this patient?** - Treat with topical nasal corticosteroid therapy, reassess after one month, and if there are no changes, perform a biopsy - Treat with topical nasal corticosteroid therapy, reassess after one month, and if there are no changes, NO biopsy - No treatment, reassess after one month, and if there are no changes, perform a biopsy - No treatment, reassess after one month, and if there are no changes, NO biopsy - No reassessment
1.3. If you answered NO to question 1.1, what would your attitude toward this patient be? - Request CT and/or MRI and reassess after obtaining the results - Reassess with a new endoscopy after one month - No reassessment	**2.3 If you answered YES to question 2.1, would the presence of any of these factors in the patient make you change your attitude and immediately perform a biopsy? (You may choose none or several options)** - Nasal obstruction - Ear fullness/otitis media with effusion - Epistaxis - Asymmetric mass - Synchronous cervical swelling - Previous head and neck radiotherapy - Smoker - Age >50 years

Table 2
Data of the participants

Participants	n (%)
Graduation	
Specialist	94 (65.7%)
Specialty resident	49 (34.3%)
Gender	
Male	76 (53.1%)
Female	67 (46.9%)
Type of institution for practice	
Central Hospital	72 (50.3%)
District Hospital	40 (28%)
Private	23 (16%)
Oncology Institute	7 (4.9%)
Other	2 (0.8%)
Region of the country for practice	
Lisbon and Tejo Valley	79 (55.2%)
North	41 (28.7%)
Center	10 (7%)
Azores Autonomous Region	5 (3.5%)
Madeira Autonomous Region	4 (2.8%)
Algarve	3 (2.1%)
Alentejo	1 (0.7%)

decision in this clinical case, motivating them for an immediate biopsy (Figure 4). However, 16% of participants would not change their decision regardless of the presence of any of the factors.

Of the participants who would not immediately perform a biopsy in clinical case 1, 46% responded that they would perform it in clinical case 2.

There were no significant differences (Table 3) in the responses about performing a biopsy in both cases between interns and specialists, type of hospital, or region of the country where they practiced, except for the participants who worked in oncology institutes, in which case all would immediately perform a biopsy in clinical case 1.

Figure 3
Diagram of the frequency of answers to question 2.2

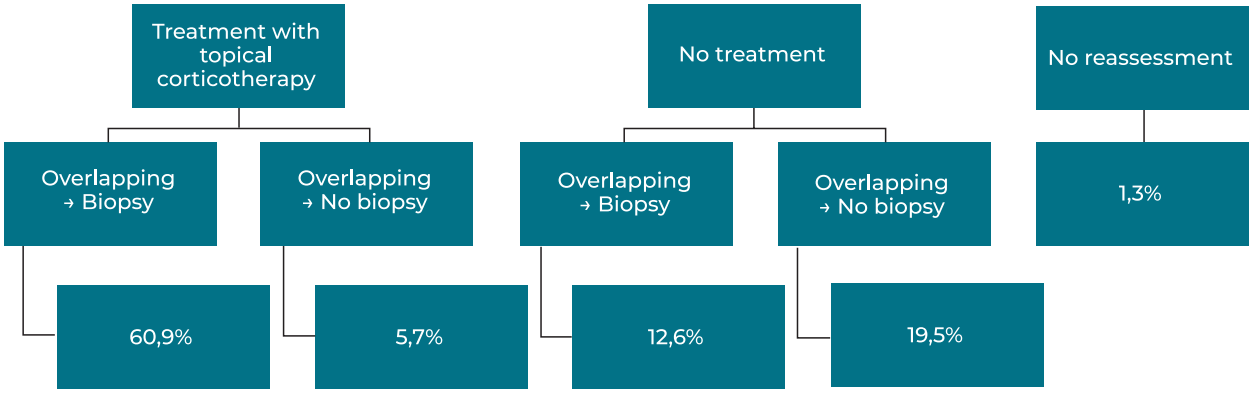


Figure 4
Graphical distribution of the frequency of answers to question 2.3

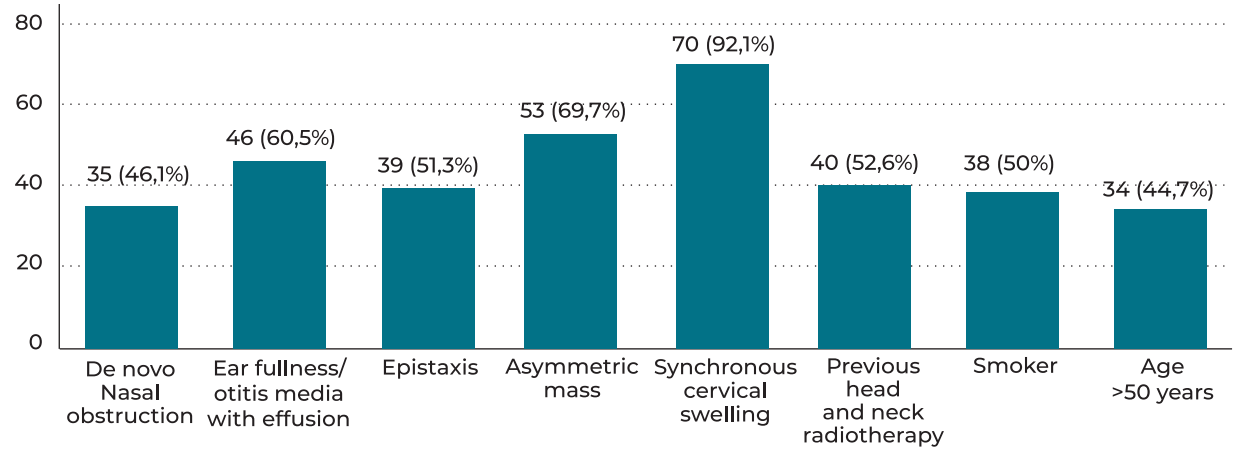


Table 3
Differences in the frequency distribution of answers to questions 1.1 and 2.1

Participant variable	Question 1.1 - Yes or No answer (p-value)	Question 2.2 - Yes or No answer (p-value)
Graduation	0.130541	0.429454
Type of institution for practice	0.94808	0.497565
Region of the country for practice	0.461525	0.914541

Discussion

Despite the lack of guidelines on the approach to nasopharyngeal masses, there is a consensus in the scientific community that biopsy should be performed in all suspicious lesions.[3] However, the definition of suspicion and approach varied among the physicians surveyed in this study. Some participants placed more value on the patient's symptoms and history, others on the macroscopic appearance of the lesion on endoscopy, while others regarded all masses as suspicious until proven otherwise. In this study, ORL physicians with a practice focused on oncology had a greater tendency to always perform a biopsy, possibly due to their greater experience in routinely performing this procedure and their greater exposure to malignant histological results, which perhaps makes them have a more interventional attitude. Many participants preferred to conduct a radiological imaging exam before performing a biopsy, even in lesions suggestive of malignancy, as in clinical case 1, where 44% of the participants chose this option. The reason for this was not questioned. However, we believe that this may be due to the desire to ensure greater safety and/or more support for the decision to perform biopsy or even be able to direct it. In some cases, this option might also aim at excluding lesions in which biopsy should not be performed without adequate precautions or is even contraindicated, such as highly vascularized lesions (e.g. juvenile angiofibroma) or those with an intracranial origin.[5] Interestingly, we found that 46% of the physicians who did not perform a biopsy in clinical case 1 would do so in clinical case 2, where the patient had already undergone imaging exams. This is not related to a higher index of suspicion in the latter case but may be due to the possibility of greater safety of the procedure after support from complementary exams. Complementary imaging tests, preferably magnetic resonance imaging (MRI), are indispensable after confirmation of a malignant diagnosis. Nevertheless, some authors advocate the need for these tests before biopsy in cases of clinical suspicion, stating that they can even rule out the possibility of malignancy in some cases, sparing the patient from unnecessary intervention.[3] Additionally, it has been established that MRI has a sensitivity of 88.2–100% for malignancy versus 85.5% sensitivity of endoscopy with biopsy.[3,6] In up to 50% of malignant cases, the first biopsy can even be negative if it is performed in an incorrect location or with insufficient depth.[7] Nonetheless, these studies did not consider the specificities of the Portuguese Health System—the waiting time associated with the request for an MRI in our country versus the possibility of immediately performing the biopsy in the first visit. Therefore, we do not believe that in Portugal, a request for MRI should delay the biopsy, as this could delay the diagnosis of potentially fatal lesions. The location of these masses causes them to manifest with nonspecific symptoms, or they may even be asymptomatic until the advanced stages. No statistically significant difference was reported for the presence of ear fullness/presence of otitis media with effusion between benign and malignant lesions.[8] In patients with tumors, the most common symptoms are synchronous cervical swelling, nasal obstruction, and epistaxis.[8] We opine that biopsy should be performed on all nasopharyngeal masses that cause any de novo symptoms or signs. Contrarily, this

opinion was not shared by the participants, only 46.1% of whom would perform a biopsy if nasal obstruction was de novo and 51.3% if epistaxis was present. This may be because, despite being among the most common symptoms, they have a low specificity for malignancy. [4] However, 92.1% would perform a biopsy in the presence of de novo cervical swelling.

The attitude of most participants who would not perform a biopsy in clinical case 2 would be to administer topical corticosteroid therapy for one month (66.6%). The reason for this was not inquired. However, based on our clinical practice, it is reasonable to deduce that this period of medication with subsequent reassessment was intended to confirm that the mass was an adenoid hypertrophy. This is because topical corticosteroid therapy can significantly reduce the size of the adenoids but not carcinoma.[9] Thus, we can infer that for these participants, a "positive" clinical test with a reduction of the mass may be interpreted as reassuring, confirming the benign nature of the lesion, while a "negative" test in which the lesion remains unchanged may motivate them to perform a biopsy at reassessment.

Endoscopy with biopsy remains the gold standard for the diagnosis of lesions suspicious for nasopharyngeal malignancy.[1] In most of the cases, this procedure can be performed under local anesthesia in the consultation office, with rare exceptions, such as the presence of hypervascularized lesions, anticoagulated and/or antiaggregated patients, or those who cannot tolerate the procedure. It presents a high benefit versus risk ratio and is the only test that ensures a definitive diagnosis.[3] If the biopsy of a clinically suspicious mass is negative, it should be repeated.[1]

Conclusion

Despite the consensus in the scientific community that all suspicious lesions in the nasopharynx should undergo a biopsy, the definition of suspicion varied in the sample of ORL physicians in Portugal who participated in this study. There was also no consensus on when the complementary imaging tests should be ordered in relation to performing a biopsy when there was a suspicion of malignancy. Some symptoms were considered suspicious for malignancy among the participants. However, some of these symptoms reported to be more common in the literature, such as epistaxis and de novo nasal obstruction, would not motivate most participants to perform a biopsy, possibly because of their low specificity for malignancy. This study demonstrates the importance of standardizing the criteria for suspicion of malignancy by developing clinical guidelines. We believe that this study could be the starting point for the creation of a working group with this objective.

Conflicts of Interest

The authors declare that there is no conflict of interests regarding the publication of this paper.

Data Confidentiality

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

Protection of humans and animals

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the 2013 Helsinki Declaration of the World Medical Association.

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Availability of scientific data

There are no datasets available, publicly related to this work.

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