

# *Palatine Tonsils Asymmetry: 10 Years Experience of the Otorhinolaryngology Service of the Clinical Hospital of the Federal University of Paraná*

## *Assimetria de Tonsilas Palatinas: Experiência de 10 Anos do Serviço de Otorrinolaringologia do Hospital de Clínicas da Universidade Federal do Paraná*

*Annelise Cristine Ballin\**, *Heloisa Nardi Koerner\*\**, *Carlos Henrique Ballin\*\*\**, *Rodrigo Pereira\*\*\*\**,  
*Lauro João Lobo Alcântara\*\*\*\*\**, *Guilberme Ribas Taques\*\*\*\*\**, *Marcos Mocellin\*\*\*\*\**.

\*\* Resident Doctor of the 3<sup>rd</sup> Year of the Otorhinolaryngology Service of the HC-UFRP.

\*\* Resident Doctor of the 2<sup>nd</sup> Year of the Otorhinolaryngology Service of the HC-UFRP.

\*\*\* Physician Graduated from UFRP.

\*\*\*\* Otorhinolaryngologist of the Hospital Pequeno Príncipe de Curitiba.

\*\*\*\* Otorhinolaryngologist of the HC-UFRP and the Hospital Pequeno Príncipe de Curitiba.

\*\*\*\*\* Resident Doctor of the 3<sup>rd</sup> Year of the Pathologic Anatomy Service of the HC-UFRP.

\*\*\*\*\* Otorhinolaryngologist. Head of the Otorhinolaryngology Service of the HC-UFRP.

Institution: Universidade Federal do Paraná.  
Curitiba / PR - Brazil.

Mail address: Heloisa Nardi Koerner - Rua Buenos Aires, 600 conj. 1901 - Bairro: Batel - Curitiba / PR - Brazil - Zip code: 80250-070 - Telephone: (+55 41) 9996-2303

-E-mail: helo\_nk@hotmail.com

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### SUMMARY

**Introduction:** A few patients with asymmetric palatine tonsils have lymphoma; but most lymphomas in palatine tonsils evolve with tonsillar asymmetry.

**Objective:** To report the profile of patients and histopathological changes in patients submitted to adenotonsillectomy/tonsillectomy with disproportional palatine tonsils.

**Method:** Retrospective study based on data analysis from the Pathologic Anatomy Service Database and in the review of reports of patients submitted to adenotonsillectomy and tonsillectomy with palatine tonsils asymmetry during the period from October 1999 through October 2009 at the Clinical Hospital (HC) of the Federal University of Paraná (UFRP).

**Results:** 50 patients took part, aged between 3 to 53 years old, mean age of 14.05 years. The anatomopathological exam confirmed 48 patients (96%) with lymphoid hyperplasia and 2 cases of lymphoma (4%). These included men aged from 40 to 53 years with complaint of unilateral increase of the tonsil, one of whom had other symptoms (asthenia and weight loss). Upon physical examination: tonsils disproportion without involvement of other organs or lymph nodes.

**Conclusion:** Our study is according to the literature as regards the fact the lymphomas are more common in men, the patient is the first one to notice the increase in volume and the asymmetry is larger than 2 degrees between palatine tonsils in cases of lymphoma. Although it is rare, even in the presence of differences, there are chances for the asymmetry to evolve to a malignant profile. The need for anatomopathological evaluation of a part must be considered along with other clinical data that suggests a malignant profile.

**Keywords:** palatine tonsil, tonsillitis, tonsil neoplasms, tonsillectomy.

### RESUMO

**Introdução:** Poucos pacientes com amígdalas palatinas assimétricas apresentam linfoma, entretanto a maioria dos linfomas em amígdalas palatinas cursam com assimetria amigdaliana.

**Objetivo:** Relatar o perfil dos pacientes e das alterações histopatológicas em pacientes submetidos a adenoamigdalectomia/amigdalectomia com amígdalas palatinas desproporcionais.

**Método:** Estudo retrospectivo, baseado na análise de dados do Banco de Dados do Serviço de Anatomia Patológica e na revisão dos prontuários de pacientes submetidos a adenoamigdalectomias e amigdalectomias com assimetria de amígdalas palatinas durante o período de outubro de 1999 a outubro de 2009 no Hospital de Clínicas (HC) da Universidade Federal do Paraná (UFRP).

**Resultados:** Foram incluídos 50 pacientes, com idade entre 3 a 53 anos, idade média de 14,05 anos. O exame anatomopatológico evidenciou 48 pacientes (96%) com hiperplasia linfóide e 2 casos de linfoma (4%). Estes eram homens de 40 e 53 anos com queixa de aumento unilateral da amígdala, um deles apresentava outros sintomas (astenia e emagrecimento). Ao exame físico: desproporção amigdaliana, sem envolvimento de outros órgãos ou linfonodos.

**Conclusões:** Nosso estudo concorda com a literatura quanto aos linfomas serem mais comuns em homens, o paciente ser o primeiro a notificar o aumento de volume e a assimetria ser maior que 2 graus entre as amígdalas palatinas em casos de linfoma. Embora raro, mesmo na presença de disparidades, há chances da assimetria cursar com um quadro maligno. A necessidade de avaliação anatomopatológica de uma peça deve ser considerada juntamente a outros dados clínicos que sugeriram um quadro maligno em vigência.

**Palavras-chave:** tonsila palatina, tonsilite, neoplasias tonsilares, tonsilectomia.

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## INTRODUCTION

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Tonsillectomy is one of the most frequent surgical procedures in otorhinolaryngology. The main indications for this procedure are: recurrent tonsillitis, sleep obstructive apnea and palatine tonsils asymmetry with suspicion of malignancy.

The regular histopathological analytic of most tissues removed from the human body is a general consensus. As regards to the products of tonsillectomies, several studies, with expressive series, demonstrate the costs do not compensate the performance of the histopathological exam, once most cases are of lymphoid hyperplasia and in those cases confirmed of neoplasms there was a preoperative suspicion (1, 2, 3).

The Department of Otorhinolaryngology of the Clinical Hospital (HC) of the Federal University of Paraná (UFPR) regularly carries out histopathological evaluation of the tonsillectomy products with suspicion of neoplasms and obligatorily in all cases of asymmetry of palatine tonsils.

The patient many times gets to the otorhinolaryngology office concerned about a tonsillar asymmetry. The procedure of the otorhinolaryngologist should be that of promptly performing the diagnosis in a case of cancer. At the same time, no procedure should be indicated that requires general anesthesia and has proper risks without a plausible indication. Therefore, related studies help the otorhinolaryngologist to adopt a correct procedure.

Several studies assess the histopathological result of all cases submitted to tonsillectomy, and find a low incidence of lymphoma. DOLEV et al. evaluated the cases with a diagnosis of palatine tonsil lymphoma and confirmed that all patients had asymmetry (6).

As the tonsillar asymmetry is the main clinical finding of the palatine tonsils lymphoma (4), the anatomopathological exam becomes critical in cases of unilateral increase of the tonsillar volume, especially when there is suspicion of the disease.

The objective of this work is to report the profile of patients with asymmetric palatine tonsils, in addition to the main histological alterations found in their surgical pieces of tonsillectomies. All patients evaluated come from the Otorhinolaryngology Service of the Clinical Hospital of the UFPR in the period of the last 10 years.

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## METHOD

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This research was submitted and approved by the

Ethics Committee in Research of the Clinical Hospital of the Federal University of Paraná.

It composes a retrospective study based on data analysis from the Pathologic Anatomy Service Database of the HC-UFPR and in the review of reports of patients submitted to tonsillectomy and with palatine tonsillar asymmetry during the period from October 1999 through October 2009 at the Clinical Hospital of the Federal University of Paraná.

The database of the Pathological Anatomy Department of the HC comprises the name of the patient, register of the hospital, date of the procedure and type of the piece sent. All patients were assessed with the piece called tonsil, palatine tonsil, tonsil and piece of the oral cavity.

The study included all patients submitted to tonsillectomy or adenotonsillectomy associated to tonsillar asymmetry.

As exclusion criteria we assumed the ulcerated or vegetating lesions located in the palatine tonsils, patients with symmetric tonsils and material forwarded for histopathological evaluation not located in the palatine tonsils.

The palatine tonsils were ranked according to the scheme proposed by BRODSKY. They were considered as: degree 0, tonsils in their place not causing airway obstruction; degree I, tonsils slightly out of the tonsillar cavity with obstruction of an area lower than 25% of the airways; degree II, tonsils obstructing the airway between 25% and 50%; degree III, tonsils obstructing from 50% to 75% of the airway; degree IV, tonsils with an obstruction over 75% of the airway. The difference of degree 1 or more between palatine tonsils was considered to be of asymmetric tonsils.

The data collected from the reports includes: age, sex, surgery indications, degree of the palatine tonsils, procedure carried out (adenotonsillectomy, tonsillectomy) and results of the anatomopathological exam.

All patients were submitted to general anesthesia, and the surgeries were performed by means of arc-shaped incision in the anterior pillar and cold peritonsillar dissection. The pharyngeal tonsils were curetted. The patients were submitted to the procedures in accordance with clinical indications. The products were immediately placed in non-sterile glasses with formaldehyde at 10% and forwarded for histopathological study in the Pathological Anatomy Department of the Clinical Hospital of the UFPR.

The material was maintained in formaldehyde for 24 hours and after dehydration it was blocked in paraffin and histological cuts were made with thickness of 5 mm that were colored by Hematoxylin-Eosin and reviewed by optical microscopy. The histopathological exams were made by the pathologists of the Discipline of Pathological Anatomy, by following uniformity standards.

## RESULTS

We reviewed 69 reports of patients with surgical product sent to the Pathological Anatomy Department called tonsil, palatine tonsil, tonsil and oral cavity piece, with a total of 69 patients. Out of these, in ten cases the material sent had an origin out of the palatine tonsils, 5 patients did not present palatine tonsils asymmetry described in the report and 4 had non-ulcerated lesion in the palatine tonsils, which were excluded from the work.

Out of the 50 patients included in the study, 23 (46%) were of the female sex and 27 (54%) of the male sex. The age of the patients ranged from 3 to 53 years, with a mean age of 14.05 years. There were 39 patients younger than 18 years (78%). Only 11 (22%) were aged between 18 and 53 years.

We carried out 31 (62%) adenotonsillectomy and 19 (38%) tonsillectomy operations. The indication for hypertrophy of palatine and pharyngeal tonsils and recurrent infections occurred in 28 cases (56%). The indication for hypertrophy of the palatine tonsils and recurrent infections amounted 17 cases (34%). The pharyngeal tonsils hypertrophy and palatine tonsils asymmetry were 3 cases (6%) and only 2 patients (4%) had surgical indication due to the increase of tonsillar volume connected to palatine tonsils asymmetry.

According to the scheme proposed by BRODSKY, each tonsil was classified and how many degrees of difference there was between them. In the evaluation of hypertrophy, each palatine tonsil was classified as per the size in 4 groups: degree I, II, III and IV, with the following outcomes: I: 28 (28%); II: 20 (20%); III: 34 (34%); IV: 18 (18%). There was a difference of 1 degree between both palatine tonsils in 21 patients (42%), a difference of 2 degrees in 21 patients (42%) and a difference of more than 2 degrees in 8 patients (16%).

As regards to the anatomopathological exams of palatine and pharyngeal tonsils, we noticed 28 patients (56%) with lymphoid hyperplasia, 14 patients (28%) with follicular lymphoid hyperplasia, 6 patients (12%) with lymphoid hyperplasia and focal suppurative acute inflammation and 2 cases of lymphoma (4%). Among the

cases of lymphoid hyperplasia and focal suppurative acute inflammation, 2 (4%) patients had small grains composed by colonies of *Actinomyces* sp. within the tonsillar crypts.

Out of the patients with lymphoma, VAA, 40 years, male, had a complaint of increase to the volume of the right tonsil for about 6 months, denying fever, weight loss, night sudoresis and other symptoms. Upon physical exam, he had the right palatine tonsil in degree III and the left in degree I, without palpable lymph-node-megaly. After tonsillectomy, the anatomopathological exam confirmed a malign immunoblastic lymphoma. Submitted to chemotherapy for about 6 months, he has a full remission of the disease for 1 year. Patient JBL, 53 years old, male, reported an increase to the right tonsil, asthenia, weight loss and dysphagy. From the exam he presented right tonsil with degree IV and left tonsil degree I, without palpable lymph-node-megaly. Submitted to tonsillectomy, the anatomopathological exam showed a malignant lymphoma of low degree of malignancy. He was followed up with the oncology of another hospital and the evolution of this patient was not in his report.

All 4 patients with ulcerated lesion in the palatine tonsils had odinophagy and the anatomopathological result was of moderately differentiated invader squamous cells carcinoma.

## DISCUSSION

Several studies with large registers and exams show the regular anatomopathological exam of the tonsillectomies has a negative cost-benefit ratio and their request is not justified when there are not other clinical evidences suggesting neoplasm (1, 2). This procedure is also adopted in our Otorhinolaryngology Service.

The tonsillar asymmetry is one of the surgical indications, but this indication should not be expanded for any type of asymmetry. In 1998, BEATY et al. defined some risk factors for the tonsillar malignancy such as: prior history of cancer of head and neck, tonsillar asymmetry, visible lesion or hard consistency upon palpation of the tonsil, unexplained loss of weight or presence of composing symptoms without other justification and the presence of cervical mass (3).

The main histological alteration found was the lymphoid hyperplasia, which is according to the finding in the worldwide literature. But the tonsils may be a site of neoplasms of head and neck. Out of these, 25% will be benign such as squamous papillomas, lymphangiomas and epidermoid cysts. In the malignant neoplasms, the

squamous cells carcinomas, lymphomas and other lymphoepithelial carcinomas (5).

The lymphoma comprise several lymphoproliferative disorders divided into Hodgkin's Lymphoma (HL) and non-Hodgkin's Lymphomas (NHL). In 25 to 30% of the cases of NHL, the affection is extranodal, and this minimum (around 1%) is in the Hodgkin's Lymphoma. The extranodal affection of head and neck occurred in about 10-30% and the Waldeyer's ring is involved in 60-70% of such cases (7, 8). As regards to all extranodal sites, the Waldeyer's ring is affected in only 10-50% of the cases. The affection of the palatine tonsil occurs in 80% of the NHLs that affect the Waldeyer's Ring (9).

In this work, we noticed two cases of lymphoma with affection of the palatine tonsil, which shows an incidence of 4% in the population assessed. In both cases, the lymphoma manifested as primary of palatine tonsil without involvement of other organs or ganglionar chains. HANNA et al. describe affection of associate lymph-nodes in 20% of the cases (7).

According to SPINOUE et al, the tonsillar lymphoma is more common in men older than 45 years and the patient is the first one to notice the tonsillar growth (10). In our study, the 2 cases were of the male sex and the patients were the first ones to report the increase of the palatine tonsil volume, which confirms the literature, despite one of the patients was 40 years old.

Pain and ulceration in tonsils are more common in patients with carcinoma than with lymphoma, but the diagnosis may only be confirmed with a careful histopathological exam (7). In this study, all patients with ulceration in tonsils had pain and were diagnosed with squamous cells carcinoma. For this reason, we excluded from the study those patients with ulcerations in the palatine tonsils.

The review of the literature clarifies the main malignancy affecting palatine tonsil in adults is the squamous cells carcinoma. In children, any tonsillar malignancy is very uncommon, but the lymphomas compose the most probable diagnosis (11). No child had neoplasm in the registers evaluated, which emphasizes the most common occurrence in adults.

An important fact reported by FELIX et al. regards the cost of each anatomopathological exam. The author mentions the cost of the exam for the government is of about 14 reais for a piece only (4). The forwarding of all parts of tonsils for analysis would be expensive especially for public hospitals that undergo lack of financial resources.

Aware that the positive samples for malignancy are around 0.19% (4), that the tonsillectomy is one of the most common surgeries in the world and that a malignancy profile is generally connected to other clinical findings that may be confirmed upon anamnesis and physical exam, the anatomopathological exam of all surgical pieces of tonsillectomies is not effective or compensatory. This study must be reserved for cases of suspicion and the tonsillar asymmetry is undoubtedly the main one.

## CONCLUSION

Although a few patients with palatine tonsil asymmetry have lymphoma, most patients with tonsillar lymphoma have tonsillar asymmetry, which does not allow us to believe the asymmetry of palatine tonsils is a benign sign. The anatomopathological review of all pieces of tonsillectomy is not necessary, but the evaluation of the suspect tonsils, especially where the patient has other associate symptoms that suggest a malignant disease, becomes primordial.

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