

Gisele Wally Braga Colleoni, José Salvador Rodrigues Oliveira,  
Antonio Correa Alves, Davimar Miranda Maciel Borducchi,  
Roberto Araújo Segreto, Onivaldo Cervantes, José Kerbauy

## Clinical management of six cases of low-risk primary tonsillar non-Hodgkin's lymphoma

Discipline of Hematology and Hemotherapy,  
Universidade Federal de São Paulo/Escola Paulista de Medicina, São Paulo, Brazil

### ABSTRACT

**Context:** There have been many reports that favor aggressive systemic treatment with chemotherapy and radiotherapy, even for well-localized lymphomas, avoiding the need for tonsillectomy of the normal tonsil.

**Case Report:** We report six cases of primary tonsillar lymphoma with a median patient age of 42 years. There were two lymphoma cases with diffuse large cells, two cases with mixed small and large cells, one with small cells and one indeterminate. They were treated with six cycles of chemotherapy and cervical radiotherapy. All patients achieved durable complete remission. Our data agree with previous reports that suggested that primary tonsillar high-grade B-cell NHL has a good prognosis if aggressively treated.

**Key words:** Non-Hodgkin's lymphoma. Tonsil. Treatment. Prognosis.

### INTRODUCTION

Waldeyer's ring is the second most common site of extra-nodal lymphomas in the gastrointestinal tract.<sup>1</sup> Among the non-Hodgkin lymphomas (NHL) found in Waldeyer's ring, the tonsils are the primary location for the disease in 80% of the cases.<sup>2</sup> Most of them have recently been recognized as MALT (mucosa-associated lymphoid tissue),<sup>3</sup> which show a progression from low-grade to high-grade lymphoma indistinguishable from other high-grade B-cell lymphomas. The origin of the tumor may be defined in 30-40% of cases, but only if residual areas of low-grade lymphoma can be identified in the biopsy specimens.<sup>1,4</sup>

In the last few years, there have been many reports that favor aggressive systemic treatment with chemotherapy and radiotherapy, even for such well-localized lymphomas, avoiding the need for tonsillectomy of the normal tonsil.<sup>2,5,6</sup>

### CASE REPORT

We report six cases of primary tonsillar non-Hodgkin's lymphoma, diagnosed between March 1986 and July 1996. There were five male patients and one female, with ages

ranging from 20 to 64 years old (a median of 42 years old) (Table 1). In accordance with the *Working Formulation* classification, there were two diffuse large cell lymphomas, two diffuse mixed small and large cell lymphomas, one small lymphocytic lymphoma and one could not be classified due to intense tonsil necrosis. At the time of this study, embedded paraffin specimens were only available for three cases (cases 1, 3 and 4). They were reviewed according to the *REAL* classification<sup>3</sup> and the diagnoses were maintained. Case 6 would probably be reclassified as MALT lymphoma (Table 1).

Four patients were staged as IIA (palatine tonsil and cervical adenomegaly) and two were staged as IA or B.<sup>7</sup> All of them were negative for HIV.

The patients were treated with six cycles of chemotherapy (two cases with BACOP, one with CHOP-Bleo and the three more recent cases with ProMACE-CytaBOM) and all patients except case 6 received cervical radiotherapy (4000 cGy), preferentially between the third and fourth cycles of chemotherapy.

All patients achieved remission with combined therapy. Five patients were in complete remission, having been followed up for 15, 17, 20, 61 and 135 months by October 1997. One of them was lost from the follow-up at 29 months after diagnosis (case 2).

Our first cases were treated with conventional schedules (CHOP-Bleo and BACOP) without CNS prophylaxis. The later three cases (one case of fast growing tumor and

tonsil necrosis and two cases of large cell lymphoma) were treated with ProMACE-CytaBOM, and were submitted to four monthly intrathecal infusions of methotrexate and dexametasone, because the disease was close to the CNS and their histology suggested a more aggressive disease, with a higher probability of relapse.

## DISCUSSION

None of our patients were submitted to tonsillectomy of the normal palatine tonsil because we believed that cervical radiotherapy was enough to prevent local relapse.<sup>2,5,6</sup>

Based on the fact that a proportion of patients with tonsillar NHL may relapse in the gastrointestinal tract,<sup>1</sup> we have been performing endoscopic examinations and biopsies of the stomach every 6 months up until five years after diagnosis.

The results from our patients are in accordance with Endo et al,<sup>2</sup> who analyzed 38 cases of primary tonsillar NHL and concluded that in patients with stage I or II tonsillar lymphomas with bulky tumor mass, chemotherapy followed by radiotherapy might be the choice of treatment.

Moreover, Barista et al<sup>8</sup> believed that stage II tonsillar NHL with aggressive histology could be treated with a combined therapy. In fact, the grades of malignancy, stage and tumor burden are the most important prognostic factors in tonsillar NHL.<sup>2,8</sup>

However, considering our small number of

**Table 1 - Patients, histologic subtype, treatment and follow-up**

Patient	Age	Sex	Stage	Histology	Treatment	Follow-up	Risk factor
1	44	M	IB	Lymphoma+ Necrosis	Promace-Cytabom + RT	CR 15+	Low
2	40	M	IIA	DSLCL	BACOP + RT	CR 29*	Low
3	36	M	IIA	DLCL	Promace-Cytabom + RT	CR 17+	Low
4	56	M	IIA	DLCL	Promace- Cytabom + RT	CR 20+	Low
5	20	M	IA	DSLCL	CHOP-Bleo + RT	CR 61+	Low
6	64	F	IIA	SLL	BACOP	CR 135+	—

\* lost from follow-up; CR = complete remission; DSLCL = diffuse small and large cell lymphoma; DLCL = diffuse large cell lymphoma; SLL = small lymphocytic lymphoma

**Table 2 - Number of risk factors present in aggressive NHL, compared with probability of complete remission (CR) and five-year survival (SV)<sup>10</sup>**

Prognostic Risk	CR rate	5 year SV
low (0 or 1 factor)	87%	73%
low-intermediate (2 factors)	67%	51%
low-intermediate (2 factors)	55%	43%
high (4 or 5 factors)	44%	26%

Risk factors considered: age, performance status, disease stage, LDH (lactic dehydrogenase) level, number of extra-nodal sites.

patients, we decided to apply the international index of the *International Non-Hodgkin's Lymphoma Factors Project*<sup>9,10</sup> for the five aggressive NHL included in this report (Table 2). All of them were scored as low-risk (Table 1), with probable disease-free survival of 70% after five years.

Our data agreed with previous reports that suggested that primary tonsillar high-grade B-cell NHL has a good prognosis if aggressively treated with combined chemotherapy and radiotherapy.

One possible explanation for this behavior is the origin of the tumor, coming from a localized and non-aggressive mucosa-associated lymphoid tissue (MALT) lymphoma.

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**Gisele Wally Braga Colleoni** – Associate professor, Discipline of Hematology e Hemotherapy, Universidade Federal de São Paulo / Escola Paulista de Medicina.

**José Salvador Rodrigues Oliveira** – Associate professor, Discipline of Hematology e Hemotherapy, Universidade Federal de São Paulo / Escola Paulista de Medicina.

**Antonio Correa Alves** – Associate professor, Department of Pathology, Universidade Federal de São Paulo / Escola Paulista de Medicina.

**Davimar Miranda Maciel Borducchi** – Postgraduate, Discipline of Hematology e Hemotherapy, Universidade Federal de São Paulo / Escola Paulista de Medicina.

**Roberto Araújo Segreto** – MD, PhD. Professor, Discipline of Radiotherapy, Universidade Federal de São Paulo / Escola Paulista de Medicina.

**Onivaldo Cervantes** – Associate professor, Head and Neck Surgery Department, Universidade Federal de São Paulo / Escola Paulista de Medicina.

**José Kerbauy** – MD, PhD. Full professor, Discipline of Hematology e Hemotherapy, Universidade Federal de São Paulo / Escola Paulista de Medicina.

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**Address for correspondence:**

Gisele Wally Braga Colleoni  
Rua Botucatu, 740 – 3º andar – Hematologia  
São Paulo/SP – Brasil - CEP 04023-900

## RESUMO

**Contexto:** Muitos trabalhos têm proposto tratamento sistêmico agressivo com quimioterapia e radioterapia para os linfomas de tonsila palatina, mesmo tratando-se de tumores bem localizados, sem a necessidade de amidalectomia contralateral.

**Relato de Caso:** Nós relatamos seis casos de linfoma primário de tonsila palatina, com idade mediana de 42 anos. Havia dois casos de linfoma difuso de grandes células, dois casos de linfoma de pequenas e grandes células, um caso de linfoma linfocítico de pequenas células e um caso indeterminado. Foram tratados com seis ciclos de quimioterapia e radioterapia cervical. Todos os pacientes atingiram remissão completa mantida. Nossos dados estão de acordo com relatos prévios que sugerem que os linfomas de células B têm bom prognóstico se agressivamente tratados.

**Palavras-chave:** Linfoma não-Hodgkin. Tonsila palatina. Tratamento prognóstico.