

# A Proposal for a New Treatment of Adnexal Low-grade Malignant Lymphoma

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## Purpose

To propose a new idea for the treatment of adnexal low-grade malignant lymphoma.

## Background [1]

Orbital low grade malignant lymphomas are very frequent and need adequate treatment. Radiotherapies have been the most useful local therapy and showed good response to reduce the mass. However several complications are inevitable. They are cataract, diffuse punctate keratopathy, dry eye and radiation retinopathy. In addition to these complications, it is not repeatable due to the limited tolerance of eyeballs against radiation.

Systemic chemotherapies are sometimes preferred to avoid radiation complications. However ; not as effective as radiation therapies to reduce tumors and their systemic complications are severe.<sup>1)</sup>

## Background [2]

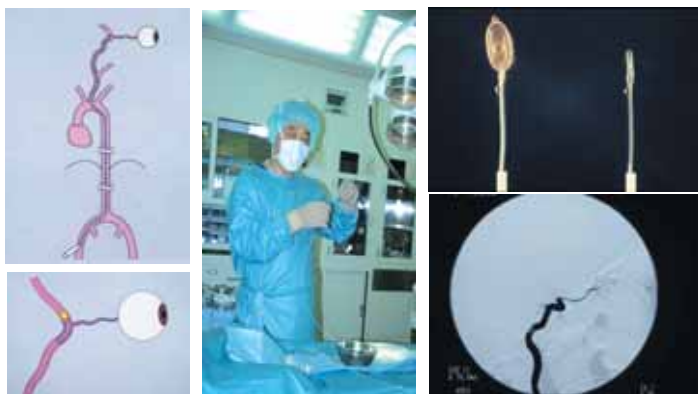
- Melphalan is an old alkylating chemotherapeutic agent which has radiomimetic activity. And its effectiveness on lymphomas is estimated from an in-vitro report using cultured lymphoma cells.<sup>2)</sup>
- A selective ophthalmic arterial injection of melphalan(SOAI) has been performed to treat ocular retinoblastomas for over 20 years and its utility and safety are recognized all over the world.<sup>3)</sup>
- Therefore SOAI is promising to treat adnexal low-grade malignant lymphoma, because it may be useful to reduce adnexal tumors without complications by radiation and systemic chemotherapies.

## An Evidence of Higher Distribution by Arterial Injection<sup>4)</sup>

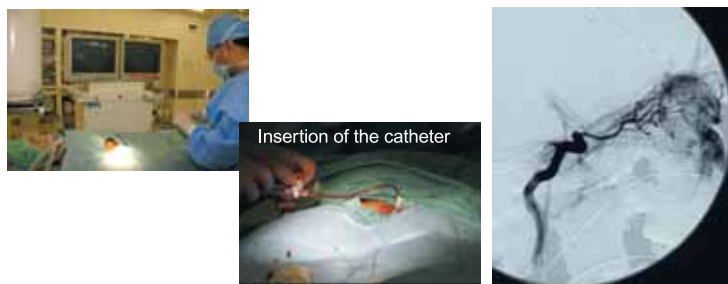
### Bleomycin Uptake by RB Tumor

Administration	Conc. of RB / Conc. of Serum	
	1	2
Venous Inj. 1.25mg/kg	Mean 0.08	
Common Carotid Inj. 1.25mg/kg		Mean 1.29

## Selective Ophthalmic Arterial Injection using a Balloon Catheter(SOAI)



Selective Ophthalmic Arterial Injection developed by Mohri M, 1989



## Safety of SOAI<sup>3)</sup> (In Retinoblastoma Treatment)

Patients: 343 ( 408 eyes,1,469 procedures)

Successful Injections:	99%
Unsuccessful Procedures:	1%
Difficulty of Femoral Artery Puncture :	5
Difficulty of Adequate Catheterization:	4
No Ophthalmic Artery Visualization:	3
Vascular Anomalies:	5

Complications:

Severe Orbital Inflammation:	0.5%
Diffuse Chorioretinal Atrophy:	0.5%
Intraoperative Bradycardia :	6.9%
Intraoperative Bronchospasm:	0.3%
Transient Vomiting:	17.0%

## Patients and Method

- Patients must have a confirmed their pathological diagnosis by incisional biopsy to be low-grade lymphoma.
- SOAI is performed as reported by Yamane<sup>5)</sup> under general anesthesia. The dose of melphalan is 5 mg. If enough reduction of the adnexal tumor is not available in 3 weeks after the injection, a further injection is required. This treatment is repeatable until enough effect is attained.

## Discussion

### Advantages of SOAI

- 1 A high concentration of a drug can be delivered to the area of the ophthalmic artery.
- 2 The slightest systemic side effect of a drug.
- 3 The greatest effect of a drug at the ocular and orbital region.

### Disadvantages of SOAI

- 1 Special training and technique is necessary.
- 2 General anesthesia is necessary.
- 3 Continuous delivery is not possible.
- 4 Determination of dosage is not easy.

### Indications

- 1 The first most adequate indication is recurrent adnexal low-grade malignant lymphoma after radiotherapy or systemic chemotherapy.
- 2 The 2nd adequate indication is patients who want to avoid complications of radiation therapy or systemic chemotherapy.

### Problems to be solved

- 1 Approval of medical ethics committee
- 2 Determination of dosage
- 3 Volunteers

## Acknowledgment

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## Reference

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