

The clinical value of dacryoscintigraphy in the selection of surgical approach for patients with functional lacrimal duct obstruction

Yong An CHUNG,* Je Ryung YOO,* Joung Sik OUM,** Sung Hoon KIM,*
Hyung Sun SOHN* and Soo Kyo CHUNG*

*Department of Nuclear Medicine and **Department of Ophthalmology,
The Catholic University of Korea, Seoul, Korea

Purpose: Dacryoscintigraphy is widely known to be an effective modality in diagnosing abnormalities of the lacrimal system that cause epiphora (pathological overflow of tear). However, dacryoscintigraphy rarely serves beyond the simple diagnostic use for lacrimal duct obstruction. In our study, dacryoscintigraphy results of patients with functional lacrimal duct obstruction are newly classified into three types, the effects and prognoses of silicone tube intubation are noted according to each type, and the role of dacryoscintigraphy in determining appropriate surgical approaches is evaluated. **Methods:** Subjects were 36 eyes of 29 patients complaining of epiphora who had increased tear meniscus, but showed no sign of obstruction on duct syringing. Impression of functional lacrimal duct obstruction was made through dacryoscintigraphy, and silicone tubes were inserted. **Results:** Patients were classified according to the results of dacryoscintigraphy; those with delayed secretion in the distal nasolacrimal duct were typed as class I; those with delays in the proximal nasolacrimal duct class II; and delayed secretion from the pre-lacrimal sac to the lacrimal sac as class III. All patients had silicone tube intubations together with selective punctoplasty. Symptomatic improvement was observed in all 6 cases of distal nasolacrimal duct obstruction (100%), 14 of 18 proximal obstruction cases (77.8%), and 8 of 12 pre-lacrimal obstructions (66.7%). **Conclusions:** Functional lacrimal duct obstruction is easily diagnosed with dacryoscintigraphy. Furthermore, its may be classified by types of obstruction to predict post-operative results of silicone tube insertion. Cases suspicious of pre-lacrimal sac obstructions in particular may achieve better operative results with adjuvant treatments in addition to silicone tube insertion.

Key words: dacryoscintigraphy, functional nasolacrimal duct obstruction, silicone tube intubation