

rescence on fluorescein angiography.^{4,5} Furthermore, the placoid shape of the retinal lesions was similar to that seen in APMPE, while the longer clinical course and late choroidal atrophy resemble those seen in serpiginous choroiditis. However, the present case and those described by Jones differed from typical APMPE or serpiginous choroiditis in that retinal lesions were extremely numerous and also developed in the mid- and far periphery.¹ We believe that our case is consistent with the description given for relentless placoid chorioretinitis, and it further supports the delineation of this pattern of disease as a distinct clinical entity.

Key Words: acute posterior multifocal placoid pigment epitheliopathy, chorioretinosis, serpiginous choroiditis

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Intermuscular Transverse Ligament Goes under the Orbital Part of the Lacrimal Gland and Attaches to the Lateral Orbital Wall

The intermuscular transverse ligament (ITL) originates from the connective tissue around the trochlea with Whitnall ligament, and separates from Whitnall ligament at the medial side of the levator palpebrae superioris muscle (LPS). It goes under the orbital side of the LPS and rejoins Whitnall ligament lateral to the LPS. After attaching to the orbital part of the lacrimal gland, it finally attaches to the

lateral orbital wall.^{1–3} A detailed report of the ITL was first published in 1995,¹ although there had been some brief descriptions of it before.^{4,5} Almost concurrently with this first report, other articles were published.^{2,3} The ITL was recognized at the time as an independent anatomical structure, covering the LPS like a sleeve in cooperation with Whitnall ligament, and thought to act as a fulcrum.^{1,2} However, while the macroscopic medial attachment of this ligament was clearly presented,^{1–3} its appearance around the lateral orbital wall was only microscopically, not macroscopically,¹ detailed. We have macroscopically observed the precise course of the ITL from the lacrimal gland to the lateral orbital wall and present clear photographs.

Report of Study

Eight upper eyelids from six postmortem cadavers of Asians (three women, two right and two left; three men, two right and two left, ages at death ranging from 73 to 90 years), were grossly dissected. Specimens were fixed in 10% buffered formalin. All cadavers were registered with the Aichi Medical University, and proper consent and approval was obtained prior to use. The methods for securing human tissue were humane and complied with the tenets of the Declaration of Helsinki. Photographs for gross dissection were taken with a digital camera (RR1, Ricoh, Tokyo, Japan).

The course and the relationship with adjoining tissues were examined in the lateral part of the ITL. The ITL was located under the orbital part of the lacrimal gland, and attached to the lateral orbital wall after rejoining with Whitnall ligament at the lateral side of the LPS (Figs. 1A, B). The ITL then sandwiched the orbital part of the lacrimal gland in cooperation with Whitnall ligament. Part of the ITL reached the lateral check ligament.

Comments

The ITL is a comparatively newly recognized ligament, first reported about 10 years ago.^{1–3} In addition to its function as a fulcrum,^{1,2} the ITL may promote lacrimal secretion from the lacrimal gland in the eye opening because, in cooperation with Whitnall ligament, it sandwiches the orbital part of the lacrimal gland. Then, as the upper conjunctival sac is always retained by the suspensory ligament continuing from the ITL,^{1–3} lacrimal fluid is thought to be effectively diffused. Part of the ITL reaches the lateral check ligament, which may contribute to the stability of the lateral canthus as an element of the lateral retinacula complex.²

Key Words: course of the ligament attachment, intermuscular transverse ligament, levator palpebrae superioris muscle, Whitnall ligament

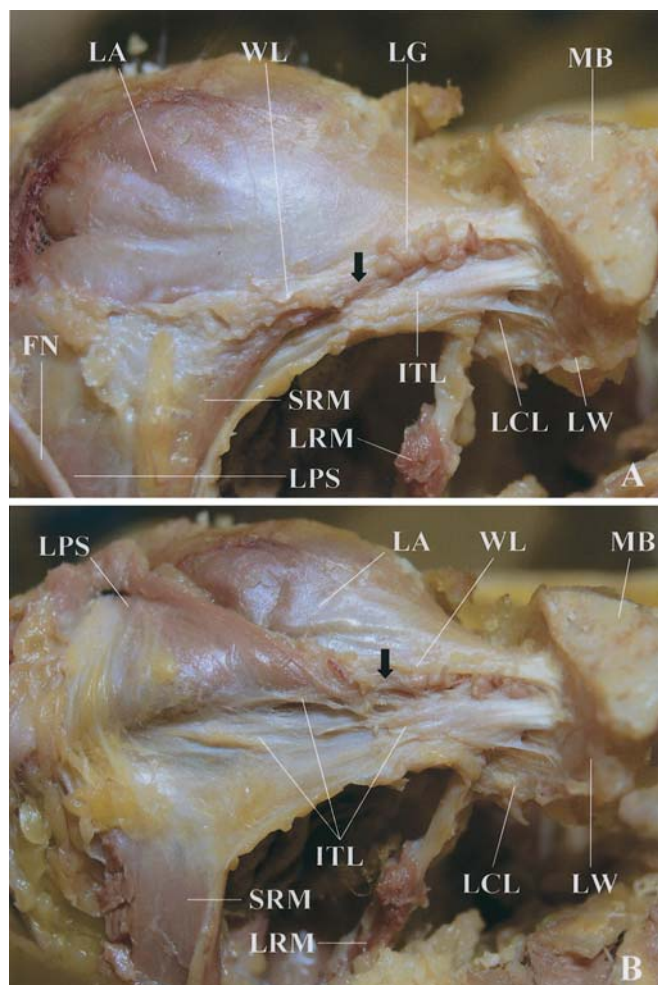


Figure 1A,B. (Top, inferior; right, lateral) Most of the lacrimal gland (LG) and the conjoined ligament of the intermuscular transverse ligament (ITL) and Whitnall ligament (WL) were removed. **A** The ITL goes under the orbital part of the lacrimal gland and attaches to the lateral orbital wall at a site deeper than Whitnall ligament. Part of the ITL reaches the lateral check ligament. The black arrow indicates the part of the ITL that rejoins Whitnall ligament. Originally, this part preserved the continuity, but this was lost when dissecting between the levator palpebrae superioris muscle (LPS) and the superior rectus muscle (SRM). **B** The LPS is incised on its belly and turned over toward the eyelid margin. The ligament between the LPS and the SRM goes to the lateral orbital wall (a central part of the ligament is lacerated and is adhering to the LPS in this figure). The black arrow indicates the original part of the ITL that rejoins Whitnall ligament. LA, levator aponeurosis; MB, malar bone; FN, frontal nerve; LRM, lateral rectus muscle; LCL, lateral check ligament; LW, lateral wall of the orbit.

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A Case of Mooren's Ulcer Associated with a Pterygium

Mooren's ulcer is a clinical entity exhibiting characteristic peripheral circumferential corneal ulceration. The pathogenesis of Mooren's ulcer is related to conjunctival invasion, and often a pseudopterygium is observed in the subsiding stage of Mooren's ulcer. It is very rare, however, for Mooren's ulcer to occur in the area of a true pterygium. To the best of our knowledge, there is only one report, published in 1976,¹ on this rare complication. We herein report a case of Mooren's ulcer that occurred in the same area as a preexisting pterygium and the results of an immunohistochemical study on excised tissues to elucidate the pathogenesis of this complication.

Case Report

In September 2001, a 51-year-old man with a painful left eye was referred to us, because of corneal perforation. His condition had been diagnosed by a local practitioner as a pterygium, without any ocular signs other than the symptoms in his left eye. Slit-lamp examination disclosed a pterygium in his left eye from the nasal conjunctiva to the limbus, and crescent-shaped thinning of the peripheral cornea with infiltration was observed along the edge of the pterygium (Fig. 1). There was corneal perforation with iris incarceration at the 8 o'clock position. Mooren's ulcer was diagnosed from typical findings of a circumferential peripheral corneal ulcer with an overhanging and infiltrated edge at its central border. The involvement of collagen disease, including rheumatoid arthritis, was denied from serological tests and medical interview. On September 20, we performed conjunctival excision and multilayered transplantation of the amniotic membrane (AM) on the nasal side of his left eye for patching. The perforation site was sealed properly with the AM, and resulted in subsidence with no recurrent melting.