# TEGMEN DEHISCENCE PRECIPITATED BY BAROTRAUMA IN IDIOPATHIC INTRACRANIAL HYPERTENSION

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Purpose

To present two novel cases of tegmen dehiscence precipitated by barotrauma in IIH.

### Methods

Retrospective review of two cases of tegmen dehiscence following barotrauma in IIH.

### Results

In the first case, a 59-year-old obese white female had IIH and developed "fluid in her ear" after the last of 8 consecutive commercial flights over 8 months. Neuro-ophthalmic examination was significant for grade 1 optic disc edema in both eyes (OU). On cranial computed tomography (CT) of the temporal bone without contrast showed a dehiscence of the right tegmen tympani and a presumed meningocele protruding into the epitympanum. Myringotomy tubes were placed and symptoms improved.

In the second case, 65-year-old obese white female, had IIH and cerebrospinal fluid (CSF) otorrhea after starting continuous positive airway pressure for obstructive sleep apnea. Neuro-ophthalmic examination was significant for mild papilledema OU with mean deviation of -1.43 dB OU on Humphrey visual field testing. CT of the left temporal bone showed an osseous defect in the left tegmen mastoideum with soft tissue herniating into the mastoid cavity and a mastoid effusion consistent with a meningoencephalocele. The patient had surgical closure of the tegmen defect with a transmastoid approach and tympanoplasty with post-operative audiometry improvement in hearing thresholds.

## Conclusions

Patients with IIH may develop symptoms of intracranial hypotension due to tegmen dehiscence following barotrauma of differing etiologies. Clinicians should be aware that both high and low intracranial pressure can occur in the same patient with IIH and that patients may present with otorrhea due to a CSF leak.

## SCLEROTHERAPHY IN ORBITAL DERMOID CYSTS: A PROMISING MINIMALLY INVASIVE APPROACH

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Purpose: Surgical excision has been the treatment of choice for orbital dermoid cysts but can be associated with complications and aesthetic concerns. We aim to study the efficacy and safety of sclerotherapy, a minimally invasive approach, in managing dermoid cysts.

Methods: Retrospective interventional study of 29 patients from 2019 to 2022 treated with Intralesional sclerotherapy with Sodium Tetradecyl Sulfate (STDS) 3% or neoadjuvant sclerotherapy with STDS 3% followed by surgical excision.

Results: The mean age of presentation was 19.5 years. The cysts were located medial angular in 12 cases, lateral angular in 7 cases, lateral orbitotemporal in 4 cases, inferotemporal in 4 cases and inferiorly in 2 cases. Among 29 patients, 17 underwent Intralesional sclerotherapy with STDS 3% while 12 received neoadjuvant sclerotherapy with STDS followed by surgical excision. Out of 17 patients who received intralesional STDS, 13(77%) achieved complete resolution of the cyst after one cycle of treatment while 5 required two additional cycles to achieve complete resolution. Neoadjuvant sclerotherapy with STDS reduced the cyst size by a mean of 5.6mm facilitating complete excision during the surgery. At a mean follow-up of 14.6 months, all patients demonstrated complete cyst resolution was noted. No complications related to sclerotherapy were noted.

Conclusion:

Sclerotherapy represents a promising and effective minimally invasive approach in the management of orbital dermoid cysts.

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## OPTIC DISC INFILTRATION AS SIGN OF MULTIPLE MYELOMA RECURRENCE

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Purpose: Multiple myeloma is a plasma cell dyscrasia with an age-standarized incidence of 3-4 per 100.000 in Caucasian population, making it the second most common hematological malignancy after non-Hodgkin lymphoma and representing the 1 % of all cancers. Ocular manifestations include a variety of symptoms, however ocular involvement is rare. Herein, we present a case report of multiple myeloma with ocular involvement as sign of recurrence.

Methods: A 62-year-old woman, with known history of lambda light chain multiple myeloma, presented with reduced visual acuity in both eyes while on maintenance chemotherapy. The patient had also mild unsteadiness and fatigue.

Results: Fundus examination revealed bilateral optic disc swelling and hemorrhages of the posterior pole. Brain imaging disclosed no abnormalities. Intracranial pressure was elevated and cerebrospinal fluid was riddled with neoplasmatic cells. After 2 months of chemotherapy, visual function and the appearance of the posterior pole returned to normal.

Conclusions: In cases of multiple myeloma, mechanisms, such as hyperviscosity syndrome, microvascular impairment and optic nerve and meningial infiltration on a cellular level may have played a pivotal role to the ocular involvement. The latter was the first sign of recurrence and its recognition led to disease's prompt remission.

### SUPERIOR OPHTHALMIC VEIN DILATION IN A PATIENT WITH TRANSIENT VISUAL LOSS

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Purpose

We present the case of a 69-year-old male that presented in a private practice with transient visual disturbance and superior ophthalmic vein dilation.

Methods

The patient was complaining of blurred vision in his right since the morning of the same day. His best corrected visual acuity in the right eye was 6/18 and 6/6 uncorrected in the left eye. Intraocular pressure was 17mmHg in both eyes. Anterior segment examination showed a bilateral incipient cataract and dilated fundus examination showed stage I hypertensive retinal changes and no further significant abnormalities. Confrontational visual fields were normal. The patient was referred for an urgent neurological/TIA assessment and OCT, visual field testing.

Results

The patient was reviewed 2 weeks later. His visual acuity was uncorrected 6/6 in both eyes. The anterior and posterior segment were unchanged. OCT of the macula was unremarkable and optic nerve OCT showed RNFL thinning in the left eye. Visual field testing was normal for the right eye and revealed an arcuate scotoma of the left eye. MRI of the brain and orbit showed no signs of ischemia and a dilation of the superior ophthalmic vein of the right eye. This was confirmed with an MRA, that also excluded any further vascular abnormalities that could be related to the vein dilation.

Conclusions

Dilation of the superior ophthalmic vein is a rare radiographic finding often associated with orbital/cavernous pathologies. It is possible that the dilation of the superior ophthalmic vein can present as transient visual disturbance.