- **Lipid degeneration**
  - Etiology: occurs as a primary or a secondary problem as a result of local or systemic disease, trauma, and after severe corneal disease (herpes)
  - Slit lamp: dense, yellow-white opacity that may fan out with feathery edges from blood vessels in the affected area of the cornea
  - R/O serum lipoprotein abnormalities in primary lipid degeneration

- **Peripheral degenerations (marginal)**
  - Terrien’s marginal degeneration
    - Etiology: unknown, slowly progressive, uncommon marginal thinning, bilateral, non-inflammatory, usually younger males, can occur at any age, often after 4th decade
    - May develop gradually over many years, asymptomatic unless astig. develops
    - If perforation is threatened or if astigmatism is severe, then reconstructive full thickness or lamellar corneal graft
Slit lamp: marginal opacification with superficial vascularization, thinning of corneal stroma margin, begins superonasally, early punctate stromal opacities, advancing edge exhibits lipid deposition, epithelium intact, corneal perforation possible; may look like early arcus; may develop pseudopterygia, causes significant astigmatism, corneal mapping helpful
• Maybe confused with Mooren’s ulcer
Mooren’s ulcer

- Etiology: rare but serious, marginal ulcer which is severe, painful, and central and circumferentially progressing, ambiguity in diagnosis, possibly an immune component, triggered by injury?
- Slit lamp: inflammation, corneal infiltration, epithelial breakdown- staining, spreads centrally and circumferentially and perforation may occur

Types: benign—older (> 40yrs), female patients, unilateral better response to treatment; young males,(20-30 yrs.) patients, bilateral, poor response to treatment, more common in blacks & Indian origin
- Can cause severe corneal melting and destruction

Treatment

- No well established treatment
- Topical & systemic steroids
- Immunosuppressive drugs
- If perforation- lamellar graft often unsuccessful

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<table>
<thead>
<tr>
<th>Table 16-4</th>
<th>Comparison of Mooren’s Ulcer and Terrien’s Marginal Degeneration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mooren’s Ulcer</strong></td>
<td><strong>Terrien’s Marginal Degeneration</strong></td>
</tr>
<tr>
<td>Unilateral or bilateral</td>
<td>Usually symmetrical; can be unilateral</td>
</tr>
<tr>
<td>Pain and inflammation</td>
<td>Usually painless and not inflamed</td>
</tr>
<tr>
<td>Epithelial breakdown at central edge of active ulcers, stains with fluorescein</td>
<td>Epithelium intact, no fluorescein staining</td>
</tr>
<tr>
<td>Spreads centrally and circumferentially; slow or rapid progression</td>
<td>Spreads circumferentially; slow progression</td>
</tr>
<tr>
<td>Overhanging central edge; can become vascularized with healing; no lipid deposits</td>
<td>Gradual central edge; vascularized base; lipid deposits</td>
</tr>
<tr>
<td>Can cause severe corneal melting, corneal destruction</td>
<td>Usually main problem is astigmatism caused by ectasia</td>
</tr>
<tr>
<td>Perforation occurs in severe cases</td>
<td>Perforation occurs in 13% of cases as a result of minor trauma</td>
</tr>
</tbody>
</table>
Pellucid Degeneration

- Rare condition, characterized by inferior (4 & 8) corneal thinning and corneal ectasia above the area of thinning.
- The thinned area is usually confined to a circumferential band-shaped area inside the inferior limbus, 4-8:00.
- Patients are often symptomatic because of significant against-the-rule astigmatism & irregular astigmatism.
- Treatment: Contact lenses, surgical intervention if vision not improved with contact lenses.

Furrow Degeneration

- Etiology: thinning of the cornea in older people in the area between the arcus senilus and limbus, no tendency to perforate and no vascularization.
**Postradiation**

- Etiology: large areas of corneal noninflammatory excavation of the limbal area after high doses of B-radiation

**Pinguecula**

- Etiology: elastic degeneration of collagen due to the combined effects of age and exposure to sunlight; also to dust and wind
- Slit lamp: a triangular gray-white to yellowish, slightly elevated nodule of degenerated conjunctiva near limbus in horizontal meridian, nasal>temporal
- Pingueculitis vs. episcleritis

- Pinguecula have little clinical significance and generally do not require treatment
- They can grow and extend into the cornea and then called pterygia
- Rarely mistaken for epithelial tumors, lack of staining with rose bengal and by fluorescence in UV