Purpose: Terrien's marginal corneal degeneration is a rare corneal degeneration characterized by peripheral corneal ectasia. As it progresses slowly and painlessly it is common the diagnosis to be made in an advanced stage. Perforation is believed to happen spontaneously or after minor trauma in up to 15% of the patients. Different types of reconstructive keratoplasty have been used with variable results. Methods: The authors present two cases of bilateral Terrien's marginal corneal degeneration. The patients were 70 and 83 years old. Visual acuity, intraocular pressure and pachymetry were recorded. Biomicroscopy and fundoscopy were performed. The patients also did corneal and anterior chamber OCT (acOCT), videokeratography (Pentacam), corneal endothelial specular microscopy and anterior segment photography. Results: An extremely slowly progression of the vascular pannus with lipid deposits was documented in the younger patient and a faster in the older. Biomicroscopy revealed an unsymmetrical bilateral marked marginal degeneration of the corneal stroma. The acOCT and videokeratography showed peripheral thinning and flattening. Careful monitoring of visual acuity and corneal topography has been done in order to secure prompt action in case of imminent perforation or diminished visual acuity. The latter happened in the older patient and a keratoplasty was performed. Conclusion: The diagnosis of Terrien's marginal degeneration is mainly based on clinical findings. Nonetheless, this work also emphasizes the importance of acOCT and videokeratography in follow-up. The cause of this particular corneal degeneration remains unknown and there are a great variety of changes in clinical characteristics, course, and prognosis between different patients.