A 32 year-old man presented with a 6 month history of loss of vision in the left eye after being struck with a drum stick during band practice. Best corrected vision in the right eye was 20/20, best corrected vision in the left eye was CF at 2 feet. Anterior segment examination was unremarkable OU. Posterior segment examination was normal OD and revealed the following OS:

Differential diagnosis: Rhegmatogenous retinal detachment, tractional retinal detachment, serous retinal detachment, retinal detachment secondary to retinal dialysis.

The patient was diagnosed with a retinal detachment involving the macula. Detailed examination with binocular indirect ophthalmoscope and scleral depression revealed a 5 clock-hour temporal dialysis (arrow) and a large outer-retinal cyst (star). The decision was made to proceed to surgery with scleral buckle, cryotherapy and external drainage of subretinal fluid. At post-op week 1 his vision had improved to 20/200 and his retina was attached. A follow up photograph is seen below – note the scleral buckle imbrication (arrow) and early chorioretinal atrophy from cryotherapy (star).
Discussion:
Retinal dialysis is a circumferential dehiscence of the retina from the underlying retinal pigment epithelium, anterior to the insertion of the vitreous base and close to the ora serrata. Retinal dialysis is commonly associated with blunt trauma to the globe. Because the temporal globe is the least protected by the bony orbit, the inferotemporal quadrant tends to be the most commonly involved quadrant in traumatic cases. However, it is important to examine the entire peripheral retina as dialysis may occur anywhere. Despite the association with trauma, many patients do not present with a known history of injury. These cases have been postulated to occur as a result of congenital malformation. Some hypothesize that because the temporal retina is the last to vascularize during development, it may remain weaker than other areas and more susceptible to abnormal development or minor, unrecognized trauma. Unfortunately, retinal detachment frequently complicates retinal dialysis. This subset of rhegmatogenous retinal detachment is important to recognize, as the treatment of choice is primary scleral buckle with cryotherapy.

Take Home Points:
- Retinal dialysis occurs most frequently in young adult patients, often in the setting of recent or remote ocular trauma
- Dialysis most commonly occurs in the inferotemporal quadrant
- Treatment of choice for retinal detachment associated with retinal dialysis is primary scleral buckle with cryotherapy