**MRI OF THE BRAIN AND ORBITS**   
  
**INDICATION:** 50-year-old female with history of mantle-cell lymphoma of bilateral lacrimal glands status post chemotherapy and has been in complete remission since 2017. The patient now presented with bilateral orbital swelling for 2 weeks. MRI of the brain and orbits was requested for evaluation.   
  
**TECHNIQUE:** Multiplanar, multisequence MR imaging of the brain and orbits was performed before and after intravenous gadolinium contrast administration with the following sequences:   
**Brain:**   
- Sagittal TFE T1W   
- Axial SE T1W-/+Gd, TSE T2FS, DWI and ADC mapping, SWI   
- Coronal T2W FFE   
- THRIVE+Gd with reconstructions in 3 planes   
- 3D FLAIR FS+Gd with reconstructions in 2 planes   
**Orbits:**   
- Axial SE T1WFS-/+Gd, T2FS   
- Coronal SE T1WFS-/+Gd, T2FS   
  
**COMPARISON:** The prior MRI of the brain and orbits dated August 2, 2017.   
  
**FINDINGS:**   
The current examination demonstrates interval increase in size of the infiltrative enhancing, T2-hyperintense lesion with restricted diffusion involving bilateral lacrimal glands and bilateral levator palpebrae superioris muscles, causing enlargement of these structures. In addition, there is increase in size of an enhancing, T2-hyperintense ovoid lesion located at the superomedial extraconal space of the right orbit, measuring 12 x 5 x 6 mm (AP x TRV x SI). There have also been interval increase in size of two enhancing nodular lesions at the right retrobalbar region, measuring 5 mm and 3 mm in maximal dimension. In addition, there is reappearance of crescentic enhancement along the inner wall of the posterior right globe, measuring 2 mm in thickness, which was present on prior exam in 2016 but resolved on the most recent MRI from 2017. These findings are concerning for recurrent orbital lymphoma.   
  
Note is again made of mild T2-hyperintense signal of the intraorbital segments of bilateral optic nerves without evidence of enhancement, suggesting bilateral optic neuropathy. The remaining segments of bilateral optic nerves appear grossly unremarkable. No enlargement of the superior opthalmic veins is seen. The superior and inferior orbital fissures as well as the cavernous sinuses are unremarkable.   
  
Note is made of increased infiltrative enhancing soft tissue at bilateral pterygopalatine fossae extending laterally to bilateral retromaxillary antral fat as well as involving bilateral foramina rotundum. Increased infiltrative enhancing soft tissue is also noted in the subcutaneous tissue of both cheeks.   
  
The study of the brain shows unchanged mild burden of scattered punctate foci of T2 hyperintense signal in the subcortical white matter of bilateral frontal lobes, which are nonspecific. No evidence of acute infarction, intracranial hemorrhage, abnormal extra-axial fluid collection, hydrocephalus, brain herniation, or abnormal enhancement is seen. The calvaria and the skull base have normal marrow signal intensity.   
  
There has been interval increase in size of multiple bilateral cervical lymph nodes, retropharyngeal lymph nodes, as well as increased prominence of the adenoid tissue. There is increased mucosal thickening of bilateral ethmoid air cells and right sphenoid sinus and unchanged mild mucosal thickening of bilateral maxillary sinuses. Bilateral mastoid air cells are unremarkable.   
  
**IMPRESSION:**   
1. Findings concerning for recurrent/relapsed lymphoma including:   
- Interval increase in size of infiltrative enhancing lesions involving bilateral lacrimal glands and bilateral levator palpebrae superioris muscles causing enlargement of these structures.   
- Increase in size of a few enhancing nodular lesions including at the superomedial extraconal space and retrobalbar region of the right orbit.   
- Reappearance of crescentic enhancement along the inner wall of the posterior right globe.   
- Increased infiltrative enhancing soft tissue at bilateral pterygopalatine fossae extending to bilateral retromaxillary antral fat and bilateral foramina rotundum.   
- Increased infiltrative enhancing soft tissue in the subcutaneous tissue of both cheeks.   
2. Interval increase in size of multiple bilateral cervical lymph nodes, retropharyngeal lymph nodes, as well as increased prominence of the adenoid tissue could represent reactive lymphoid hyperplasia or lymphomatous involvement.   
3. Findings suggestive of bilateral optic neuropathy.