Learning Objectives
1. Recognize a variable presentation of glioblastoma multiforme (GBM).
2. Understand the difference between trigeminal neuralgia and trigeminal neuropathy and its implications

Case
A 68-year-old man complained to his primary care physician (PCP) of intermittent right-sided facial numbness. Initial evaluation and physical exam was negative for an inflammatory or infectious process. Over the next few months, the patient started to notice intermittent earaches and jaw pain as well as pain around his right orbit and right cheekbone. However, his most pressing symptom was the feeling of numbness spreading over his right cheek. In addition to this numbness, he started developing temporal headaches as well as nausea. He returned to his PCP for further evaluation and an MRI of the brain was obtained at this time. The MRI identified enhancing mass in the right temporal lobe extended through a widened foramen ovale with thickening of the third division of the right trigeminal nerve. The lesion extends inferiorly along the nerve.

Figure 1: MRI Brain w/ & w/o contrast
Heterogeneously enhancing lesion within the right anterior temporal lobe. The enhancing mass is seen extending through a widened foramen ovale with thickening of the third division of the right trigeminal nerve. The lesion extends inferiorly along the nerve.

<table>
<thead>
<tr>
<th>Location</th>
<th>Trigeminal Neuropathy</th>
<th>Trigeminal Neuralgia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Trigeminal area (can occasionally radiate beyond this area)</td>
<td>Trigeminal region (intra- or extraoral)</td>
</tr>
<tr>
<td>Timing</td>
<td>Continuous</td>
<td>Episodic</td>
</tr>
<tr>
<td>Character</td>
<td>Dull pain, numbness, and/or sensory loss</td>
<td>Sharp and/or shooting pain</td>
</tr>
<tr>
<td>Triggers</td>
<td>Occasionally may have additional areas of allodynia triggered by light touch</td>
<td>Discrete trigger zones provoked by light touch as well as eating, talking, etc…</td>
</tr>
</tbody>
</table>

Table 1: Comparing Trigeminal Neuropathy with Trigeminal Neuralgia**

Discussion
Trigeminal neuralgia most often presents as paroxysmal intense facial pain in the distribution of the trigeminal nerve. However, in the case of neoplastic processes that affect the trigeminal nerve it is more common for patients to describe numbness rather than pain, which is more accurately called trigeminal neuropathy (Table 1). This is especially important, as neoplastic processes resulting in trigeminal neuropathy are more likely to be aggressive. There is weak evidence that suggests routine imaging for trigeminal neuralgia (and neuropathy) may identify a cause for the neuralgia in 15% of patients.

Glioblastoma multiforme (GBM) is a common form of glial tumors found in adults. Out of the four grades of gliomas, GBM or grade 4 astrocytoma, is the most aggressive. The typical presentation is a slowly progressive neurologic deficit; however, patients typically report headaches as the most common symptom. Standard treatment includes maximal surgical resection, radiotherapy and concomitant chemotherapy, typically with temozolomide. Unfortunately, none of these treatments are curative, but survival is improved with gross total resection, which can be achieved with earlier diagnosis.

References