**Figure 1:** Lateral C-Spine x-rays: (a) on initial presentation and b) following halo traction, gradually increased to 40lbs. Basilar invagination and loss of cervical alignment are evident (a), as well as diffuse changes resulting from severe inflammatory (rheumatoid) arthritis.
Figure 2: MRI demonstrating basilar invagination, and compression onto the medulla with subaxial cervical spinal stenosis (a and b, blue arrows). CTA of the neck showing an aberrant left vertebral artery and coronal plane images demonstrated erosion of the C1 lateral mass on that side (c).
Figure 3: Intraoperative photo before (a) and after (b) application of posterior distraction (blue arrows). Laminar spreader is placed on base of skull and superior aspect of the C2 lamina, C1 arch has been removed.
**Figure 4:** Post-operative T2 MRI sagittal (a) and axial (b) select cuts confirming reduction of the basilar invagination and decompression of the brainstem and cervical spine.
**Figure 5**: Lateral C-spine (a); anterior-posterior (b) and lateral scoliosis (c) radiographs two months following surgery. Due to the erosion of the lateral masses from the patient’s inflammatory arthritis, C2 translaminar fixation and pedicle screws were utilized.