1. Conservative Management Only (no surgical treatment offered):  Yes  No

2. Conservative Management - Duration

Length of period of conservative management (from the time of imaging diagnosis), if applicable:

3. Chiari Decompression - Suboccipital Craniectomy

Size of suboccipital craniectomy (resection of occipital bone, including posterior foramen magnum). Provide a superior-inferior and a left-right choice.

Superior to inferior (at midline of foramen magnum) <2 cm  
 Superior to inferior (at midline of foramen magnum) 2.1-3 cm  
 Superior to inferior (at midline of foramen magnum) 3.1-5 cm  
 Superior to inferior (at midline of foramen magnum) >5.1 cm  
 Left to right <2 cm  
 Left to right 2.1-3 cm  
 Left to right 3.1-5 cm  
 Left to right >5.1 cm

4. Chiari Decompression - Cervical Laminectomy

Removal of lamina/ae (and spinous process where appropriate) of cervical vertebra. Check all the applicable levels:

C1  
 C2  
 C3  
 C4  
 C5

5. Chiari Decompression - C1 Laminotomy

Laminotomy (= shaving upper edge of C1 lamina, maintaining C1 arch closed)  
Enter "no" if a C1 laminectomy, or no manipulation of C1 was performed instead:

Yes  
 No

6. Chiari Decompression - Intra-Operative Imaging

Use of intra-operative ultrasound or MRI to inform surgical approach:

None  
 Ultrasound - standard (B-scan real time)  
 Ultrasound - color Doppler  
 Intraoperative MRI

7. Chiari Decompression - Dural Technique

Surgical approach to the dura:

Extradural only (no dural opening, may include resection of atlanto-occipital membrane)  
 Dural splitting/scoring (= incision of outer layer of dura)  
 Dural opening only (dura stays open at end of surgery)  
 Dural augmentaion with duraplasty  
 Primary durarraphy without duraplasty

8. Chiari Decompression - Operative Arachnoid Maneuver

Surgical treatment of the arachnoid:

Arachnoid sparing (left intact)  
 Arachnoid opening  
 Arachnoid opening plus lysis of adhesions  
 Arachnoid resection or retraction

9. Chiari Decompression - Tonsillar Reduction

Surgical manipulation of the cerebellar tonsils:

None  
 Tonsillar cauterization  
 Tonsillar resection

10. Chiari Decompression - Parameters for Verification of Decompression

Visualizing obex or choroid plexus of 4th ventricle:

Yes  
 No

11. Chiari Decompression - Parameters for Verification of Decompression

Visualize lateral aspect of cervicomedullary junction/cranial or spinal nerve rootlets:

Yes  
 No

12. Chiari Decompression – Adding a 4th ventricular Stent

Yes  
 No

13. Chiari Decompression - Intra-operative finding of arachnoid veil

Found, left closed  
 Found, dissected open  
 Not found

14. Chiari Decompression - Plugging of obex

Yes  
 No

15. Chiari Decompression - Dural Closure

When the dura has been opened, describe the technique for dural closure:

No Closure (dura left open)  
 Primary closure, without Duraplasty (aka Durarraphy)  
 Dural augmentation with autologous graft (fascia or pericranium)  
 Dural augmentation with allograft (cadaveric graft)  
 Dural augmentation with biological membrane (e.g. bovine, porcine, Alloderm)  
 Dural augmentation with combined graft (e.g. pericranium-GoreTex)  
 Dural augmentation with synthetic graft (e.g. GoreTex)

16. Chiari Decompression - Dural Closure Supplements

After dural closure with or without graft, additional agents used to supplement closure:

None (no supplement)  
 Fibrin glue (e.g. Tisseal)  
 Hydrogel (e.g. Duraseal)  
 Gel foam

17. Chiari Decompressioin - Valsalva challenge

After dural closure with or without graft, was a Valsalva challenge performed to assess the integrity of the closure?

Yes  
 No

18. Chiari Decompression - Cranioplasty/Cerebelloplasty

Cranioplasty/cerebelloplasty performed during initial Chiari decompression.  
Choose one or more items:

None  
 Autologous material  
 Mesh (e.g. titanium)  
 Bone cement (e.g. methylmethacrylate)

19. Chiari Decompression - Estimated Blood Loss

Estimated intra-operative blood loss during Chiari decompression.

Quantify the blood loss in cc:

20. Chiari Decompression - Length of Hospital Stay Post-Operatively

Number of inpatient days after Chiari decompression

Enter the number of days of the postoperative hospitalization:

21. Ventral Decompression

Ventral approach for decompression of anterior cranivertebral junction, including partial or full removal of inferior clivus, dens, anterior C1:

Not performed  
 Open Transoral approach  
 Endoscopic transnasal approach

22. Operative Syrinx Treatment

Direct surgical treatment of syrinx:

Not performed  
 Syrinx drainage (e.g. needle aspiration)  
 Syrinx fenestration  
 Syrinx shunt – syringosubarachnoid shunt  
 Syrinx shunt – syringopleural shunt  
 Syrinx shunt – syringoperitoneal shunt

23. Complication, Early - Requirement for Surgical Wound Revision

Surgical wound revision required <6 months after surgery for infection, CSF leak, pseudomeningocele:

Yes  
 No

24. Complication, Early - Requirement for Revision Chiari Decompression

Suboptimal response to index Chiari decompression observed for <6 months and requiring revision Chiari Decompression:

Yes  
 No

25. Complication, Early - Requirement for Cranioplasty/Cerebelloplasty

Cranioplasty/cerebelloplasty performed for cerebellar ptosis or "slump" occurring <6 months after Chiari decompression. Choose one or more items:

None  
 Autologous material  
 Mesh (e.g. titanium)  
 Bone cement (e.g. methylmethacrylate)

26. Complication, Early, - Hydrocephalus and Pseudotumor-like syndrome

Diagnosed <6 months after Chiari decompression and requiring surgical intervention:

Complication not encountered  
 External ventricular drain placed temporarily, but no permanent CSF diversionary procedure was required  
 CSF shunt placed (ventricular)  
 CSF shunt placed (lumbar)  
 Endoscopic third ventriculostomy performed

27. Complication, Late - Requirement for Revision Decompression

Surgical wound revision required ≥6 months after surgery for infection, CSF leak, pseudomeningocele, cerebellar ptosis, patulous grafts/dural ectasia:

Yes  
 No

28. Complication, Late - Requirement for Cranioplasty/Cerebelloplasty

Cranioplasty/cerebelloplasty performed for cerebellar ptosis or "slump" occurring ≥6 months after Chiari decompression. Choose one or more items:

None  
 Autologous material  
 Mesh (e.g. titanium)  
 Bone cement (e.g. methylmethacrylate)

29. Complication, Late - Spinal Deformity

New diagnosis of spinal deformity or progression of know spinal deformity (it requires Cobb’s angle ≥11 degrees on X-Ray):

Yes  
 No

30. Cervical or Craniocervical Fusion

Fusion of the high cervical or craniocervical region due to craniocervical instability:

No  
 Yes, occiput to C2  
 Yes, occiput to C3  
 Yes, occiput to C4  
 Yes, occiput to C5  
 Yes, occiput to below C5

31. Spinal Deformity - Thoracolumbar brace

Implementation of bracing to halt progression of spinal deformity:

No  
 Yes

If yes, indicate the number of months:

32. Spinal Deformity - Deformity Correction

Surgical stabilization or correction of spinal deformity:

Not performed  
 Yes, posterior stabilization only  
 Yes, anterior stabilization only  
 Yes, anterior and posterior stabilization

If yes, indicate the highest level of the surgical stabilization:  
 If yes, indicate the lowest level of the surgical stabilization:

## Instructions

*Please see the Data Dictionary for definitions for each of the data elements included in this CRF Module.*

Important note: None of the data elements included on this CRF are considered Core (i.e., strongly recommended for all studies to collect). These data elements are supplemental and should be collected on clinical trials and only if the research team considers them appropriate for their study.