



## *Chiari Academy Video Transcription Chiari Bootcamp- Related Conditions*

0:00

[Music]

0:05

In this lesson we will discuss several medical conditions that are either related to or commonly

0:10

occur with Chiari including, migraines, Syringomyelia Ehlers Danlos Syndrome or EDS,

0:16

Idiopathic Intracranial Hypertension or IIH and Hydrocephalus. According to the Chiari 1000 nearly

0:23

2/3's of Chiari patients including adults and children and both female and male have also been

0:29

diagnosed to suffering from migraines. Migraines are defined as severe throbbing pain or a pulsing

0:35

sensation usually on one side of the head and often accompanied by nausea, vomiting, and extreme

0:41

sensitivity to light and sound. Migraine attacks can last for hours or even days and the pain can

0:47

be extreme. Although migraines affect more than 10% of the general population they are poorly

0:52

understood and the migraine Chiari connection, if there is one, has received essentially no

0:57

research attention. It is not known if Chiari also causes migraines in some people if migraine

1:03

sufferers are more susceptible to developing Chiari or if there is some other type of link

1:08

between the two. What is known is that a large portion of Chiari patients especially women not

1:13

only get the classic Valsalva type chiari headache but they also suffer from classic migraines as

1:18

well, which don't respond as well to surgery. One of the most serious conditions related to

1:23

chiari is Syringomyelia. Syringomyelia refers to the development of a fluid filled cyst or sryinx

1:30

inside the tissue of the spinal cord over time. A sryinx can expand and put tremendous pressure on

1:35

and damage the nerve roots in the cord. Estimates for how often syringes occur vary widely in the

1:41

literature but data from the chiari 1000 indicates that 20% of chiari patients also have a sryinx

1:48

with chiari. Syringes most often occur near the top of the spine but can also occur lower down.

1:54

The nerve damage can cause loss of sensation and weakness in the arms, legs, hands and feet,

1:59

inability to regulate body temperature and bladder and bowel problems, pain in the neck, Arms,

2:05

Upper back, and shoulders is very common and is referred to as the cape effect of Syringomyelia.

2:11

As the syrinx expands it can cause permanent nerve damage and even lead to paralysis. Although there

2:16

are several theories, how and why syringes form is poorly understood and there is currently no

2:22

way to predict who will develop a syrinx in terms of treatment. The presence of a syrinx

2:26

is a strong indicator for surgery and a reduction in sryinxes size is a key marker of a successful

2:32

decompression. Unfortunately patients with a syrinx tend to have poorer outcomes especially

2:37

if they have been symptomatic for a long period of time. Ehlers-Danlos Syndrome simply known as EDS,

2:43

are a group of inherited connective tissue disorders connective tissue provides structure

2:48

for the human body and support for its internal components. Disorders involving connective tissue

2:53

such as EDS can lead to problems with joint hypermobility, joint dislocations, fragile skin,

3:00

poor wound healing, and vascular and heart problems. While there are a growing number

3:04

of recognized types of EDS the one associated with chiari is hypermobile. Unlike other EDS

3:10

types which have a recognized genetic mutation the underlying genetic cause of hEDS is not known

3:17

and therefore it is diagnosed based on symptoms including joint hypermobility plus the presence

3:22

of other indicators. Independent of chiari EDS can cause debilitating pain fatigue and headaches

3:29

with no effective treatment options. Research indicates that 9 - 12% of chiari patients also

3:35

have hypermobile EDS the overwhelming majority of whom are female. However because EDS diagnosis is

3:42

difficult the actual number may be higher. In terms of treatment EDS often leads to cervical

3:47

instability which requires stabilization during Chiari decompression. Unfortunately in terms

3:53

of outcomes this subset of patients will often continue to suffer from many problems associated

3:58

with EDS even after decompression surgery. There is also an overlap between EDS and Postural

4:04

Orthostatic Tachycardia syndrome or POTS according to Dysautonomia International, POTS is defined as

4:10

a change in heart rate of a certain value after standing up from a prone position. However this

4:16

clinical definition doesn't do justice to the effect that POTS can have on people. In fact it

4:21

has been estimated that the quality of life in POTS patients is comparable to those on

4:26

dialysis for kidney failure. In between 1/3 and 1/2 of chiari patients with EDS may also suffer

4:32

from POTS. Idiopathic Intracranial Hypertension, also known as pseudotumor cerebri, is a condition

4:38

characterized by an increase in intracranial pressure, the pressure of spinal fluid in the head

4:43

- with no apparent cause. The increased pressure causes headaches, visual issues, nausea, and

4:49

ringing in the ears. If left untreated it can lead to permanent vision problems due to swelling of

4:55

the optic nerve. Among adults it affects primarily women and BMI appears to play a strong role with

5:01

one study finding 80% of adult women with the condition were obese. Treatment can include

5:07

drugs to lower the intracranial pressure and or the surgical placement of a shunt. Data from the

5:12

chiari 1000 indicates that 8% of chiari patients have also been diagnosed with intracranial

5:18

hypertension. Currently it is not known if one condition causes the other, if they both share

5:23

a common underlying cause or if patients with both are a statistical coincidence. Diagnostically the

5:29

condition can create a problem because of the symptom overlap with chiari. This is likely the

5:34

cause for some surgical failures where patients experience a temporary relief only for symptoms

5:39

to return in a couple of months. At that point an additional procedure is likely needed to insert

5:44

a shunt to control the elevated pressure. Hydrocephalus is an abnormal accumulation

5:49

of cerebral spinal fluid in the ventricles of the brain. Over time the ventricles expand and

5:54

put pressure on the brain tissue causing symptoms such as headaches, nausea, tiredness, and loss of

5:59

balance. While it is commonly seen with Chiari II it is also present in about 5 to 10% of chiari I

6:06

cases. Hydrocephalus is thought to arise from an imbalance in the production and absorption

6:11

of CSF often due to obstruction in the natural flow of the fluid. As with other conditions,

6:17

the link between Hydrocephalus and chiari I has not been fully worked out it is possible that the

6:22

increased pressure associated with Hydrocephalus can push out the cerebellar tonsils but it is also

6:28

possible that both conditions arise from the same underlying cause. Complicating matters is

6:33

the fact that hydrocephalus can develop after chiari decompression surgery. Hydrocephalus is

6:38

usually treated surgically often by placing a shunt to divert and drain the excess fluid for

6:44

patients. Having a permanent shunt can be problematic as shunts can get infected and

6:49

malfunction necessitating additional procedures also shunts placed in a young child may need to

6:55

be replaced as the child grows. When hydrocephalus is found with chiari at the time of diagnosis the

7:00

hydrocephalus is usually treated first research has shown that chiari symptoms improved nearly

7:06

80% of the time in cases such as these and additional chiari surgery was only required

7:11

about 10% of the time. When hydrocephalus develops after chiari decompression most

7:16

cases will require the placement of a permanent shunt but some people do improve with temporary

7:21

diversion of the excess fluid. To summarize chiari patients sometimes suffer from one or

7:26

more additional health conditions whose symptoms often overlap with chiari symptoms 2/3 of chiari

7:32

patients also experience migraines. Syringomyelia is when spinal fluid collects inside the tissue of

7:38

the spinal cord damaging nerves weakening muscles and potentially leading to paralysis. hypermobile

7:44

ehlers-danlos syndrome is a heritable connective tissue disorder which can lead to cervical

7:49

instability and postural orthostatic tachycardia syndrome. idiopathic intracranial hypertension

7:55

also known as pseudotumor cerebri is characterized by a continuous increase in the pressure of the

8:00

fluid in the brain. It can be treated either through medication or by placing a permanent shunt

8:05

into the brain. Hydrocephalus is when there is an abnormally large amount of fluid in the brain

8:10

it also can be treated by placing a permanent shunt in the brain to divert the extra fluid