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## A Study on Accessory Falx Cerebelli: A Case Report

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### **Abstract:**

*Falx cerebelli is a sickle shaped Dural folds that usually harbors a single occipital venous sinuous at its posterior attachments. A study of falxcerebelli in 40 cadavers was done in Department of Anatomy Sivaraj Institute of Medical Sciences. In 4 specimens, accessory falx cerebelli was observed. The length and thickness of falx cerebelli was measured and compared with normal falx cerebelli and its sinuses were observed. Variation in the falx cerebelli showing marginal sinus, accessory sinus draining in to sigmoid sinus were observed. Neurosurgeons and Neuroradiologist should be aware of such variations as these could be potential source of haemorrhage or may lead to erroneous interpretation during imaging of the posterior cranial fossa.*

### **1. Introduction**

**FALX CEREBELLI:** A small sickle shaped dural fold lies between two Cerebellar Hemispheres posteriorly. It encloses the occipital sinus.

#### *1.1. Attachments*

Base: Posterior Part of inferior surface of tentorium cerebelli in midline.

Posterior Margin: Attached to Internal occipital crest

Apex: Frequently dividing into two folds which disappear at the sides of foramen magnum.



*Figure 1: Normal Falx Cerebelli  
(FC – Falx Cerebelli)*

## 2. Materials & Methods

A Study of falx cerebelli in 40 cadavers was done in the Department of Anatomy, Sivaraj Institute of medical sciences. In 4 cases, accessory falx cerebelli and one case marginal sinus was observed. Length, Breath and Thickness of falx cerebelli was measured. The drainage of occipital and marginal sinuses was also observed.



Figure 2: Measurement of Falx cerebelli

Marginal sinus- (A small bilateral dural venous sinus which skirt over the margin of foramen magnum)

## 3. Case Report

Average measurement of falx cerebelli:

Falx Cerebelli	Length (mm)	Breath (mm)	Thickness (mm)
Main Falx Cerebelli	42.2	10.9	4.6
Accessory Falx Cerebelli	33.3	6.5	0.7

Table 1

### CASE: 01

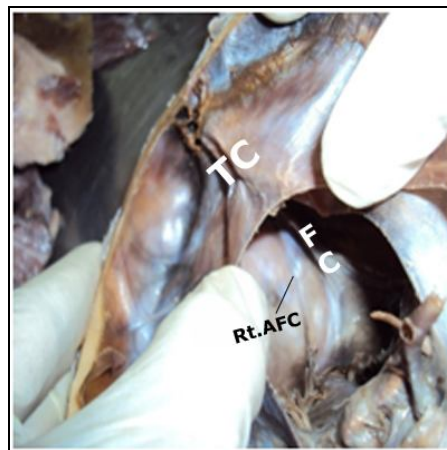


Figure 3: Right Accessory Falx Cerebelli  
(TC – Tentorium Cerebelli)

Falx Cerebelli	Length (mm)	Breath (mm)	Thickness (mm)
Main Falx cerebelli	38.5	14.5	4.5
Accessory Falx cerebelli	48.5	2.5	0.8

Table 2

Presence of right accessory falx cerebelli with right accessory occipital sinus which drains into right sigmoid sinus.  
No marginal sinus was observed.

**CASE: 02**

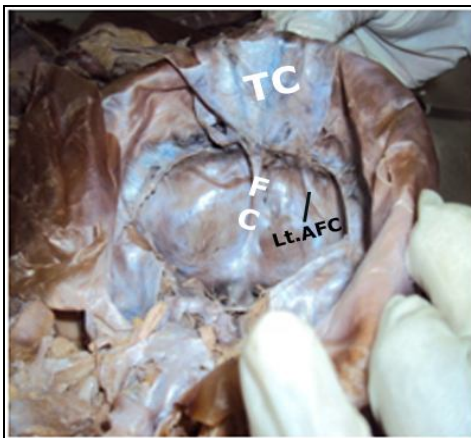


Figure 4: Left Rudimentary Accessory False Cerebelli

Falx Cerebelli	Length (mm)	Breath (mm)	Thickness (mm)
Main Falx Cerebelli	42.5	13	3.6
Rudimentary Falx Cerebelli	23.5	4.5	0.8

Table 3

Presence of Rudimentary accessory falx cerebelli on left side.  
No accessory occipital and marginal sinuses was observed.

**CASE: 03**

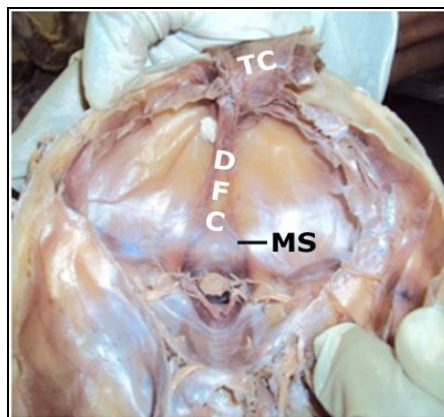
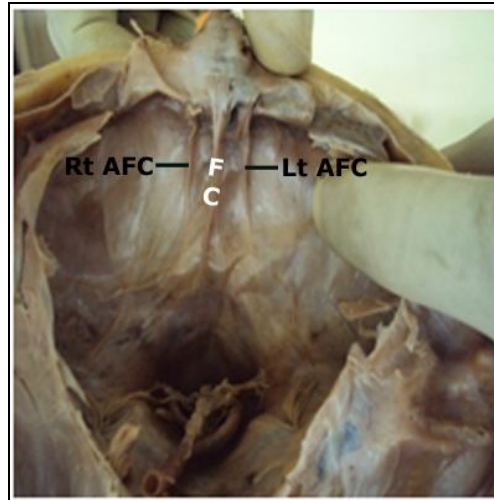


Figure 5: Duplicated Falx Cerebelli and Marginal Sinus

Presence of duplicated falx cerebelli.  
 The length of Right falx cerebelli is more than left falx cerebelli.  
 Presence of Occipital sinus was observed only in Right falx cerebelli.  
 Presence of Marginal sinus was observed.

#### CASE: 04



*Figure 6: Right and Left Accessory Falx Cerebelli*

Presence of two accessory falx cerebelli on either side of main falx cerebelli.  
 Presence of occipital sinus was observed only in main falx cerebelli.  
 The distance from main falx cerebelli to Right falx cerebelli is 9.3mm, whereas for Left falx cerebelli is 10.6mm.

#### 4. Discussion

The variant of falx cerebelli is associated with agenesis of corpus callosum, vermis & chiari malformation. In our study no such developmental anomaly was observed. The presence of accessory occipital venous sinus may present problems with diagnostic and operative procedure. Knowledge of such an aberrant venous sinus is important in order to prevent inadvertent injury during craniotomies of this region.

Accessory occipital venous sinus may act as collateral to drain posterior cranial fossa. In such condition transverse or sigmoid sinus thrombosis can occur.

#### 5. Clinical Significance

Accessory falx cerebelli may lead to false interpretation during imaging of posterior cranial fossa. The neurosurgeon and Neuro radiologist should be aware of such variations. These could be a potential source of haemorrhage during sub occipital approach.

#### 6. References

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