



# Persistent headache attributed to past cervicocephalic artery dissection: clinical characterization and predictors of headache persistence

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## Objective

To evaluate clinical characteristics and predictors of **headache persistence post-cervicocephalic artery dissection (PHPAD)**

## Methods

**Retrospective cohort study** of patients with a clinical-radiological diagnosis of cervicocephalic artery dissection (CCAD) between 01/2015-06/2020  
Demographics and clinical data obtained by clinical records; acute and persistent headache characterization obtained via **telephonic questionnaires**

## Results

- CCAD (N) = 90; **58 male**
- Mean age at diagnosis: **48 years**

- **22 (24%) had persistent headache**

vs Non-PHPAD (N=68)

### PHPAD group

- No differences in gender, age and cardiovascular risk factors
- Statistically had + headache history (+ migraine without aura, 3 under preventive)
- Had + acute headache/cervical pain and headache as the first symptom
- **Greater involvement of the posterior circulation (p=0.054)**
- Acute headache: + **severe/very severe**, + pulsatile/press, 20/22 with + symptoms
- However, **delay from symptoms onset to diagnosis (3.6 vs 1.9 days)**

Logistic regression model:

- Previous headache history
- Posterior circulation involvement
- Lower initial NIHSS

**= predictive factors of PHPAD**

	CCAD (N=90)	Non-PHPAD (N=68)
Hypertension	6 (27.3%)	20 (29.4)
Diabetes	1 (4.5%)	3 (4.4%)
Dyslipidemia	5 (22.7%)	19 (27.9%)
Smoking	7 (31.8%)	19 (27.9%)
Alcoholic habits	7 (31.8%)	27 (39.7%)
Trauma history	10 (45.5%)	25 (36.7%)
Headache History**	14 (63.6%)	3 (4.5%)

Location* (p=0.035)	CCAD (N=90)	Non-PHPAD (N=68)
Intracranial	5 (22.7%)	6 (8.8%)
Cervical	6 (27.3%)	38 (55.9%)
Intra+cervical	11 (50%)	22 (32.4%)
Circulation (p=0.054)		
Anterior	11 (50%)	50 (76.9%)
Posterior	10 (45.5%)	13 (20%)
Both	1 (4.5%)	2 (30.8%)

Symptoms	CCAD (N=90)	Non-PHPAD (N=68)
Acute headache/neck pain*	18 (81.2%)	28 (43%)
Rechanneling (mean 4,8 mo)	5/16 (31.3%)	18/41 (43.9)
Time symptoms-diagnoses (days) **	3.6 +/- 1.8	1.9 +/- 1.5

\*\*p<0.001; \*p<0.05 (statistically significant)

## Conclusion

Few studies characterized patients with PHPAD and even less addressed its predictors. In our study, about a quarter of patients with a history of dissection had PHPAD. Previous headache history, posterior circulation dissection and less severe disease were identified as predictors of headache persistence.