



# Prevalence and Characteristics of Headaches in Patients Undergoing Coronary Interventions: A Prospective Observational Study

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## INTRODUCTION

Headache disorders affect around 45% of adults and are classified by International Classification of Headache Disorders (ICHD-3).(1,2)

## OBJECTIVES

A recent study in China found a specific headache type in 25% of patients during or after coronary interventions.(3) This study aims to investigate headache related to coronary interventions.

## METHODS



### Participant enrollment

Adults undergoing coronary angiography or percutaneous coronary intervention at Chamran Hospital, Isfahan, from January to June 2023 participated after consent.

### Interview

Demographic data and headache history were collected pre-procedure.

### Data Gathering

Headache incidence and characteristics were evaluated immediately after, and at 24 hours, 72 hours, one week, and two weeks post-procedure, using a checklist based on ICHD-3 criteria.

### Data Analysis

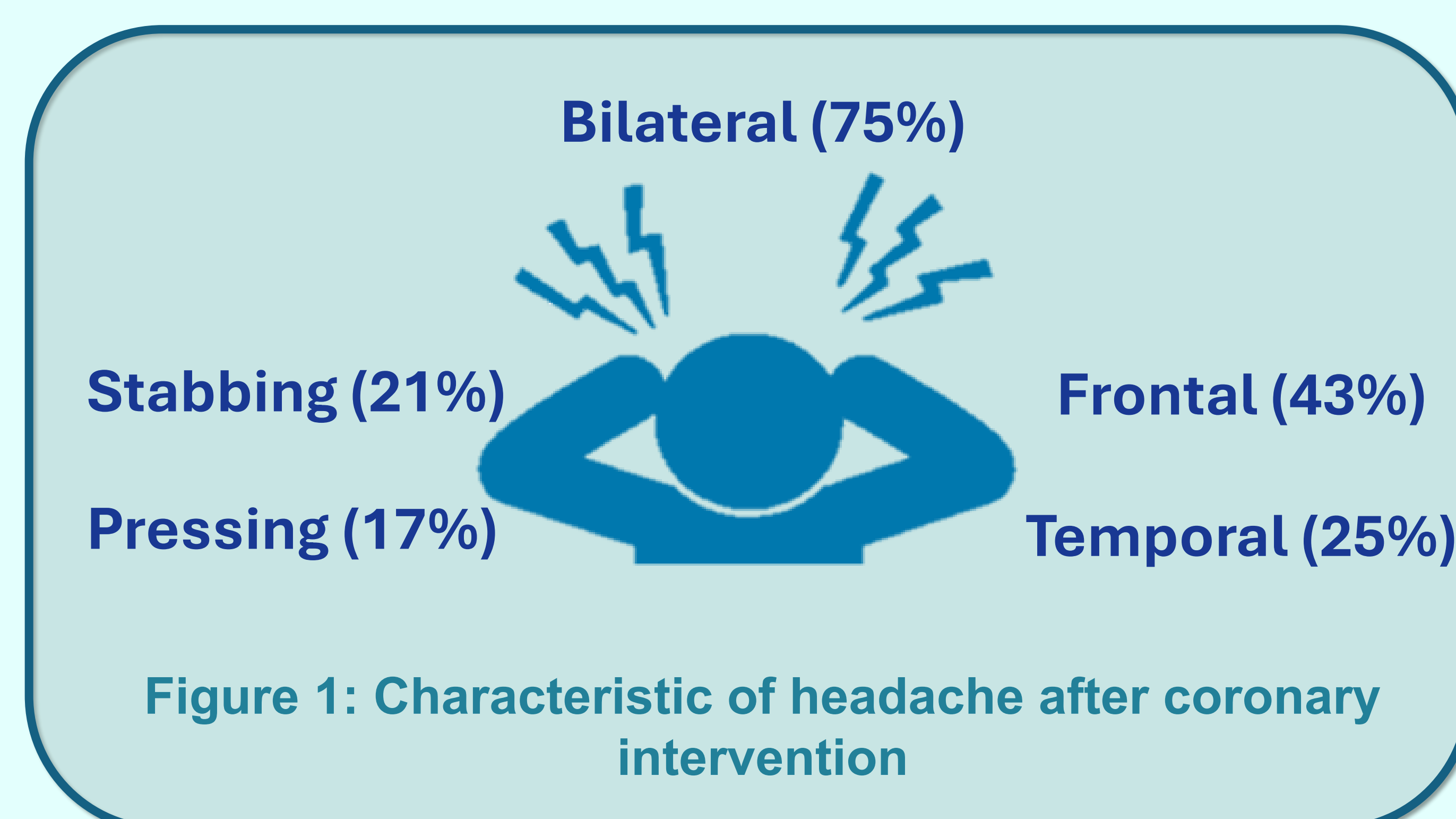
Data were analyzed descriptively using SPSS version 26.

## RESULTS

**271** patients participated in the study  
25.5% female, mean age 60.5

**41 %** patients (111) experienced headaches after coronary intervention lasting an average of 158 minutes (range: seconds to hours) With intensity of  $4.2 \pm 2.1$  on the Numeric Rating Scale

Most headaches were **bilateral** (75%), located **frontally** (43%) or **temporally** (25%). Common qualities described were **stabbing** (21%) and **pressing** (17%) associated with nausea (16%), photophobia (10%), phonophobia (10%), and aura (8%).



## CONCLUSION

The study found a **41%** incidence of coronary intervention-related headaches in Iran, which is higher than a previous report from China of 25%. This suggests that headaches are a common complication of coronary interventions.

## REFERENCES

- 1.Stovner L, Hagen K, Jensen R, Katsarava Z, Lipton R, Scher A, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. Cephalalgia. 2007 Mar;27(3):193–210.
- 2.Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition. Cephalalgia. 2018 Jan;38(1):1–211.
- 3.Lu C, Zhang L, Liu C, Wang Z, Zhang R, Wang L, et al. Characteristics of headache during and/or after coronary intervention: A prospective observational study. Cephalalgia. 2022 May;42(6):435–43.