Poster P-205

Evaluation of ischemic cardiovascular and cerebrovascular adverse events by 10-year cardiovascular risk score in patients with migraine treated with erenumab

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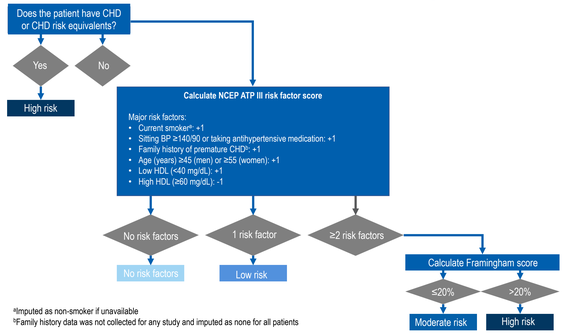
Introduction

- The efficacy of the fully human monoclonal antibody erenumab (erenumab-aooe in the United States) is well-established, with significant reductions in migraine frequency and improved quality of life observed in patients with chronic and episodic migraine[1-5]
- While ischemic cardiovascular and cerebrovascular adverse events (ICCAEs) in clinical trial patients have been previously reported, any potential correlation to the degree of cardiovascular risk hasn't been explored.
- The objective of this pooled analysis was to assess the rate of ICCAEs in patients participating in erenumab clinical trials based on their 10-year cardiovascular (CV) risk score at baseline

Methods

- Data were pooled from the double-blind treatment phase (DBTP) of four pivotal clinical trials as well as the open-label treatment phases (OLTP) that evaluated erenumab 70 mg and 140 mg versus placebo for migraine prevention
  - NCT02066415 [12-week DBTP]
  - NCT02483585 [12-week DBTP/24-week OLTP]
  - NCTNCT02174861 [52-week OLTP]
  - NCT01952574 [12-week DBTP/256-week OLTP]
  - NCT02456740 [24-week DBTP/24-week active treatment phase]
- Cardiovascular risk assessment algorithm incorporating the National Cholesterol Education Program, Adult Treatment Panel III, and Framingham Risk Score used to classify patients at baseline based on the 10-year risk of cardiac, cerebrovascular, and peripheral artery disease as:
  - No risk factors
  - Moderate risk
  - Low risk
  - High risk
- Adverse events (AEs) were coded using MedDRA v22.1 and graded according to CTCAE v4.03
  - ICCAEs were identified using narrow MedDRA terminology
    - Ischaemic central nervous system vascular conditions SMQ (narrow), ischemic heart disease SMQ (narrow) and peripheral arterial disease (PAD) AMQ (narrow)
  - Hypertension-related AEs were identified as new or worsening hypertension using narrow and broad MedDRA terminology
    - Hypertension SMQ (narrow and broad)

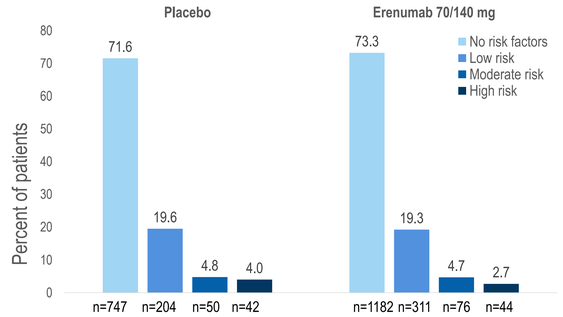
Cardiovascular risk assessment algorithm



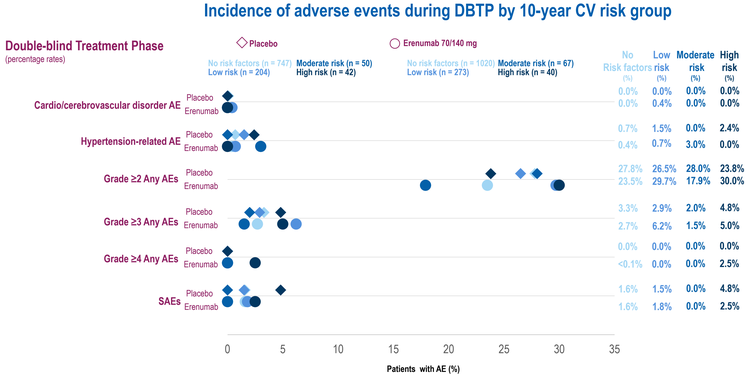
[a]Imputed as non-smoker if unavailable
[b]Family history data was not collected for any study and imputed as none for all patients

Ischemic **cardiovascular** and **cerebrovascular** adverse **events** were **uncommon** and the incidence rates were **similar** across CV risk **categories**

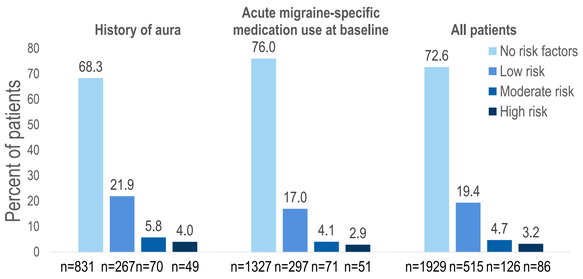
Distribution of patients with moderate-high CV risk at baseline was similar between placebo and treatment groups



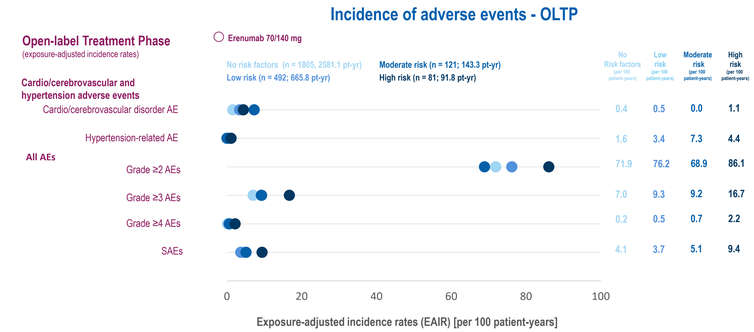
Patients with moderate-high 10-year CV risk had a similar safety profile when compared to lower risk groups and across treatment groups during the DBTP



Distribution of CV risk groups was similar across patients with migraine-related cardio/cerebrovascular risk factors



CV adverse events were uncommon throughout the OLTP and rates were similar across 10-year CV risk groups



Results

DBTP

- Erenumab-treated patients with high (n=40) and moderate (n=67) 10-year CV risk did not experience any ICCAEs during the DBTP
- One patient in the erenumab group with low 10-year CV risk (n=273) experienced a cerebral venous thrombosis
- The incidence of CV AEs was similar between erenumab and placebo groups in all CV risk groups
- The incidence of CV AEs was similar in patients with moderate and high 10-year CV risk compared with patients with lower risk
- Patients in the high CV risk group treated with erenumab had a similar proportion of treatment-emergent AEs compared to the patients in the lower CV risk groups

OLTP

- Throughout the pooled OLTP data CV AEs were uncommon and exposure-adjusted incidence rates (EAIRs) were similar across patients with low, moderate, and high 10-year CV risk
- The EAIR of hypertension-related AEs was 1.6, 3.4, 7.3, and 4.4 (per 100 patient-years) for no risk factor, low, moderate, and high 10-year CV risk groups, respectively
- Across all risk groups treatment discontinuation was low
  - Treatment discontinuation due to CV AEs was very low
    - 7 subjects discontinued treatment during the OLTP due to a CV-related AE
      - 6 subjects were in the no risk factor group
      - 1 subject was in the high-risk group
- For serious AEs, the EAIR was similar for patients with no risk factors, low risk, and moderate risk and higher for those with high risk

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Disclosures

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