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Public Health Service
Food and Drug Administration
Center for Drug Evaluation and Research
Office of Surveillance and Epidemiology

Pediatric Postmarketing Pharmacovigilance

Date:	December 11, 2019
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Product Name:	Omidria (Phenylephrine and ketorolac intraocular solution)
Pediatric Labeling Approval Date:	December 8, 2017
Application Type/Number:	NDA 205388
Applicant/Sponsor:	Omeros
OSE RCM #:	2019-1554

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EXECUTIVE SUMMARY

This review evaluates FDA Adverse Event Reporting System (FAERS) reports for Omidria (phenylephrine and ketorolac intraocular solution) in pediatric patients younger than age 17 years. The Division of Pharmacovigilance (DPV) conducted this review in accordance with the Food and Drug Administration Amendments Act (FDAAA) Best Pharmaceuticals for Children Act (BPCA). This review focuses on serious unlabeled adverse events associated with Omidria in pediatric patients.

FDA approved Omidria on May 30, 2014 for prevention of intraoperative miosis and reduction of postoperative pain in adults. On December 8, 2017, the indication was expanded to include pediatric patients younger than 17 years.

DPV reviewed all FAERS reports received by FDA from May 30, 2014 to July 11, 2019. The FAERS search retrieved no pediatric reports. There is no evidence that there are pediatric safety concerns with Omidria at this time. DPV recommends no regulatory action and will continue to monitor all adverse events associated with the use of Omidria.

1 INTRODUCTION

This review evaluates FDA Adverse Event Reporting System (FAERS) reports for Omidria in pediatric patients younger than age 17 years. The Division of Pharmacovigilance (DPV) conducted this review in accordance with the Food and Drug Administration Amendments Act (FDAAA) Best Pharmaceuticals for Children Act (BPCA). This review focuses on serious unlabeled adverse events associated with Omidria in pediatric patients.

1.1 PEDIATRIC REGULATORY HISTORY

FDA approved Omidria 1%/0.3% for adults on May 30, 2014 and for pediatrics ages neonate to less than 17 years on December 8, 2017.[1] Omidria is an intraocular solution indicated for prevention of intraoperative miosis and reduction of postoperative pain.

One randomized, parallel group, double-masked, active-controlled study was done to support the approved pediatric indication. In this study, 78 pediatric subjects (0 to 3 years) undergoing cataract extraction with or without lens replacement were given a single dose of either phenylephrine and ketorolac intraocular solution or phenylephrine intraocular solution alone in a double-masked fashion. Three serious adverse events were reported in the phenylephrine and ketorolac group but none of these were considered to be related to the drug.[1] On review of other observed adverse events, it was felt there was no overall difference in safety between pediatric and adult patients.[1,2]

The Office of Surveillance and Epidemiology has not previously presented an Omidria pediatric evaluation to the Pediatric Advisory Committee (PAC). This review was triggered by the pediatric labeling at initial approval on December 8, 2017.

1.2 RELEVANT LABELED SAFETY INFORMATION

Omidria labeling provides the following safety information (excerpted from the pertinent sections). For further Omidria labeling information, please refer to full prescribing information[2].

CONTRAINDICATIONS

None.

WARNINGS AND PRECAUTIONS

Systemic exposure to phenylephrine may cause elevations in blood pressure.

ADVERSE REACTIONS

The most common reported adverse reactions (≥2%) are eye irritation, posterior capsule opacification, increased intraocular pressure, and anterior chamber inflammation.

PEDIATRIC USE

The safety and effectiveness of Omidria have been established in the pediatric population from neonates to adolescents (birth to younger than 17 years). Use of Omidria in this population is supported by evidence from adequate and well-controlled studies of Omidria in adults with

additional data from a single active-controlled safety study in pediatric patients up to 3 years old. No overall differences in safety was observed between pediatric and adult patients.

2 METHODS AND MATERIALS

2.1 FAERS SEARCH STRATEGY

DPV searched the FAERS database with the strategy described in Table 1.

Table 1. FAERS Search Strategy*	
Date of Search	July 12, 2019
Time Period of Search	May 30, 2014† - July 11, 2019
Search Type	FBIS Quick Query
Product Terms	Product name - Omidria
MedDRA Search Terms (Version 22.0)	All Preferred Terms (PT)
* See Appendix A for a description of the FAERS database. † U.S. approval date	

3 RESULTS

3.1 FAERS

3.1.1 Total Number of FAERS Reports by Age

Table 2 presents the number of adult and pediatric FAERS reports from May 30, 2014 to July 11, 2019 with Omidria.

Table 2. Total Adult and Pediatric FAERS Reports* Received by FDA from May 30, 2014 to July 11, 2019 with Omidria			
	All reports (U.S.)	**Serious† (U.S.)**	**Death (U.S.)**
Adults (≥ 17 years)	29 (28)	21 (21)	1 (1)
Pediatrics (0 - <17 years)	0 (0)	0 (0)	0 (0)
* May include duplicates and transplacental exposures, and have not been assessed for causality † For the purposes of this review, the following outcomes qualify as serious: death, life- threatening, hospitalization (initial or prolonged), disability, congenital anomaly, required intervention, and other serious important medical events.			

3.1.2 Summary of Fatal Pediatric Cases (N=0)

We did not identify any fatal pediatric adverse event reports.

4 DISCUSSION

DPV reviewed all FAERS reports with Omidria use from May 30, 2014 to July 11, 2019 and found no pediatric cases. Therefore, there were no new safety signals identified.

5 CONCLUSION

DPV did not identify any pediatric safety concerns for Omidria at this time.

6 RECOMMENDATION

DPV recommends no regulatory action at this time, and will continue to monitor all adverse events associated with the use of Omidria

7 REFERENCES

1. Boyd W, Chambers W. Cross-Discipline Team Leader and Deputy Division Director Summary Review for Omidria (phenylephrine and ketorolac injection, 1%/0.3%) NDA 205388/S-006. December 4, 2017. (https://www.fda.gov/media/110345/download Accessed: July 10, 2019).

2. Omidria [package insert]. Seattle, WA: Omeros Corporation; December 2017. (https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/205388s006lbl.pdf. Accessed on July 12, 2019).

8 APPENDICES

8.1 APPENDIX A. FDA ADVERSE EVENT REPORTING SYSTEM

FDA Adverse Event Reporting System (FAERS)

The FDA Adverse Event Reporting System (FAERS) is a database that contains information on adverse event and medication error reports submitted to FDA. The database is designed to support FDA's postmarketing safety surveillance program for drug and therapeutic biological products. The informatic structure of the database adheres to the international safety reporting guidance issued by the International Council on Harmonisation. Adverse events and medication errors are coded to terms in the Medical Dictionary for Regulatory Activities (MedDRA) terminology. The suspect products are coded to valid tradenames or active ingredients in the FAERS Product Dictionary (FPD).

FAERS data have limitations. First, there is no certainty that the reported event was actually due to the product. FDA does not require that a causal relationship between a product and event be proven, and reports do not always contain enough detail to properly evaluate an event. Further, FDA does not receive reports for every adverse event or medication error that occurs with a product. Many factors can influence whether or not an event will be reported, such as the time a product has been marketed and publicity about an event. Therefore, FAERS data cannot be used to calculate the incidence of an adverse event or medication error in the U.S. population

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