

## Evidence to modify guidelines for routine retinopathy of prematurity screening to avoid childhood blindness in middle-income countries

[Meraz-Gutiérrez, M.P.<sup>a</sup>](#), [Olguín-Manríquez, F.J.<sup>b</sup>](#), [Arriola-López, A.E.<sup>b</sup>](#), [Berrones-Medina, D.<sup>b</sup>](#), [Price, K.W.<sup>c</sup>](#), [Morales-Canton, V.<sup>c</sup>](#), [Martínez-Castellanos, M.A.<sup>b</sup>](#)

<sup>a</sup>Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico

<sup>b</sup>Asociación para Evitar la Ceguera en México, Hospital Dr. Luis Sánchez Bulnes I.A.P., Mexico

<sup>c</sup>New York University School of Medicine, United States

### Abstract

Objective: Retinopathy of prematurity (ROP), the leading cause of childhood blindness around the world, is potentially avoidable. The incidence of ROP varies between countries due to a variety of factors. The aim of this study is to assess the effectiveness of screening criteria in Mexico valid in March 2015 as an example of a middle-income country. Methods: The medical records of 261 patients from a single center covering a period of 42 months (October 2011-March 2015) were retrospectively analyzed to identify infants with ROP that did not fall within screening criteria set forth by regional health authorities. Results: Of the 261 infants in our study group, 55 (21.1%) weighed more than 1500 g (ranging from 466 to 2910), 129 (49.4%) had a GA >30 weeks (ranging from 22 to 36), and 47 (18%) patients presented both. Overall, the mean birth weight for infants with ROP was  $1270.6 \pm 365.3$  g. The mean gestational age was  $30.4 \pm 2.3$  weeks. Following actual AAO/AAP guidelines for ROP screening, 17 infants (6.5%) in our study group would have gone undiagnosed. Conclusions: These findings show that the valid guidelines at the time of the screening were based on a different population and were not sufficient to detect all ROP cases in a middle-income country. With the update of the Mexican guidelines established in July 2015, the patients from this study would have been screened. Therefore, review and modification of the current screening guidelines in other middle-income countries should be considered to include all babies at risk for ROP. © 2016 Sociedad Mexicana de Oftalmología.

SciVal Topic Prominence

Topic: [Retinopathy of Prematurity | Infant, Premature | aggressive posterior](#)

Prominence percentile: 96.107

Author keywords

Blindness; Developing countries; Neonatal Intensive Care Unit; Oxygen; Retinopathy of prematurity

Indexed keywords

EMTREE terms:	drug	Bevacizumab; ranibizumab
EMTREE terms:	medical	antiangiogenic therapy; Articlebirth weight; blindness; childhood blindness; gestational age; human; infant; low level laser therapy; major clinical study; medical record; Mexico; practice guideline; retrolental fibroplasia; retrospective study; vitrectomy

Chemicals and CAS Registry Numbers:  
bevacizumab, 216974-75-3; ranibizumab, 347396-82-1

- **ISSN:** 01874519
- **CODEN:** RMOFE
- **Source Type:** Journal
- **Original language:** English
- **DOI:** 10.1016/j.mexoft.2015.09.005
- **Document Type:** Article
- **Publisher:** Elsevier Doyma