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### NEW ORLEANS, LOUISIANA

**Celine Saade, MD; Laith Kadasi, MD; and Daniel Gealy, MD**, all third-year residents in Ophthalmology at Rhode Island Hospital, check the November journal from their phones in the French Quarter. The residents attended the 2017 Annual Meeting of the American Academy of Ophthalmology in New Orleans.

Below, **Dr. Gealy** presented his research, *The Role of Imaging in Children with Periorbital Cellulitis*, selected as a Best Poster for having received the highest grades by the AAO Annual Meeting Program Committee.



**Scientific Poster #427**  
The Role of Imaging in Children with Periorbital Cellulitis

**BROWN**

**ABSTRACT**  
Orbital cellulitis is characterized by a set of findings commonly based on their anatomical location. Because pediatric patients who undergo CT are at a lifetime risk for malignancy, it is important to minimize the radiation exposure to the orbit. We performed a retrospective cohort study of 250 children <18 years of age who were referred to a tertiary hospital emergency room with periorbital cellulitis from 2013-2016.

**BACKGROUND:** Periorbital soft tissue infections are characterized by their anatomical location. Because pediatric patients who undergo CT are at a lifetime risk for malignancy, it is important to minimize the radiation exposure to the orbit. We performed a retrospective cohort study of 250 children <18 years of age who were referred to a tertiary hospital emergency room with periorbital cellulitis from 2013-2016.

**RESULTS:** 250 charts met inclusion criteria, and 18 were excluded (16 for trauma and 2 for recent sinus surgery). The average age was 6 years (Range 1 month to 18 years, median 5 years), 48% were female, and 59% were white (see Table 1).

**CONCLUSIONS:** There is enough variability in the clinical presentation of periorbital cellulitis that it is difficult to recommend an algorithmic approach to the decision of whether or not to obtain CT imaging. Though orbital signs indicate the presence or absence of orbital cellulitis, specialist evaluation should still be considered to prevent unnecessary imaging and radiation exposure in this vulnerable population. Directions for future research would include an assessment of how these patients are treated. Treatment options include outpatient PO antibiotics and admission for inpatient IV antibiotics, observation and/or surgical drainage.

**REFERENCES:**

**of imaging in children with periorbital cellulitis**

Daniel Gealy MD  
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	Immunization	Pharyngitis	Wenckebach	Pain with eye movement	Abnormality of extraocular muscles	Decreased visual acuity	Proptosis	Orbital CT	Discharge	Orbital CT	Proptosis	Erythema confined to orbit
Sensitivity	100%	93%	88%	84%	79%	52%	20%	0%	42%	52%	10%	72%
Specificity	3%	8%	50%	43%	64%	64%	90%	94%	100%	100%	100%	97%
Positive Predictive Value	9%	16%	21%	18%	47%	13%	23%	0%	56%	92%	100%	86%
Negative Predictive Value	100%	94%	95%	96%	90%	93%	87%	52%	77%	60%	94%	93%

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