



Geographic health disparities in the Los Angeles pediatric neck abscess population



Varun Angajala^a, Kevin Hur^a, Lia Jacobson^{a,b}, Christian Hochstim^{a,b,*}

^a Caruso Department of Otolaryngology, Head and Neck Surgery Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

^b Division of Otolaryngology, Head and Neck Surgery, Children's Hospital Los Angeles, Los Angeles, CA, USA

ARTICLE INFO

Keywords:

Pediatric abscess
Head/neck abscess
Deep neck infection
Geospatial health
Health disparities
Los Angeles

ABSTRACT

Objective: To assess geographical sociodemographic differences in neck abscesses that require surgical drainage in Los Angeles.

Study Design: retrospective review.

Methods: We reviewed the medical records of 119 consecutive pediatric patients at Children's Hospital Los Angeles (CHLA) from 2014 to 2017 with a diagnosis of a neck abscess requiring incision and drainage. Sociodemographic information including zip code of residence was extracted and analyzed with Chi-square, Fisher's exact test, and multivariate logistic regression.

Results: The average age of patients with a neck abscess in this study was 3.4 years old, 53.8% were female, 54.6% were Hispanic, and 82.5% had public health insurance. 79% of patients had an abscess located in the superficial neck, and 10.1% had an abscess located in the retropharyngeal space. There were no significant differences in gender, race, type of health insurance, or income between patients that lived within 10 miles of CHLA versus those that lived farther than 10 miles. On multivariate analysis, zip codes with a high volume of neck abscesses were more likely to be lower income neighborhoods. Gender, race, type of health insurance, and distance from CHLA were not associated with zip codes with a high volume of neck abscesses.

Conclusion: Geographic areas in the greater Los Angeles community with a high volume of neck abscesses requiring incision and drainage at our institution were associated with lower income neighborhoods.

Level of evidence: IV.

1. Introduction

Pediatric neck abscesses represent a significant proportion of pediatric admissions and pediatric hospital burden. The incidence of deep space neck infections in the United States was 1.37 per 10,000 in 2009 [1]. Risk factors associated with the high incidence of pediatric neck abscesses include thyroglossal cysts and other congenital malformations, endotracheal intubation, multiple laryngoscopies, application of suction catheters, and use of CPAP devices [2]. However, many patients present without any of these risk factors. Risk factors for surgical drainage include history of previous emergency department visit, fluctuance, and age less than 4 years [3]. MRSA prevalence in head and neck infections has increased by 16.3% between 2001 and 2006. Today, MRSA is the most common organism found in pediatric neck abscesses. Furthermore, many children with neck abscesses due to MRSA present with no other risk factors, although there may be an association with

contact sports, daycares, or contact with incarcerated persons [4].

Surgical incision and drainage is the gold standard treatment for pediatric abscesses, with minimal long-term morbidity and mortality [5]. Furthermore, a delay in surgical drainage up to 7 days is not associated with any increase in morbidity or mortality in pediatric patients [6]. Children with abscesses larger than 25 mm do not respond quickly to antibiotics and require surgery, although high-dose IV antibiotics may be effective in stable children with smaller abscesses [7]. In a separate study, medical management was shown to be significantly more likely to fail when compared to surgical intervention for abscesses greater than 2 cm in size [8].

In adult neck abscesses, socioeconomic factors such as illiteracy and poverty have been identified as significant contributory factors toward the high incidence of neck abscesses in developing countries [9]. In low income populations, the inadequate level of preventive care services in their community such as dental care has been cited as an area of

* Corresponding author. Division of Otolaryngology – Head and Neck Surgery, Children's Hospital Los Angeles, 4650 Sunset Blvd., Mailstop 58, Los Angeles, CA, 90027, USA.

E-mail address: chochstim@chla.usc.edu (C. Hochstim).

<https://doi.org/10.1016/j.ijporl.2018.07.043>

Received 19 March 2018; Received in revised form 24 July 2018; Accepted 24 July 2018

Available online 26 July 2018

0165-5876/ © 2018 Published by Elsevier B.V.

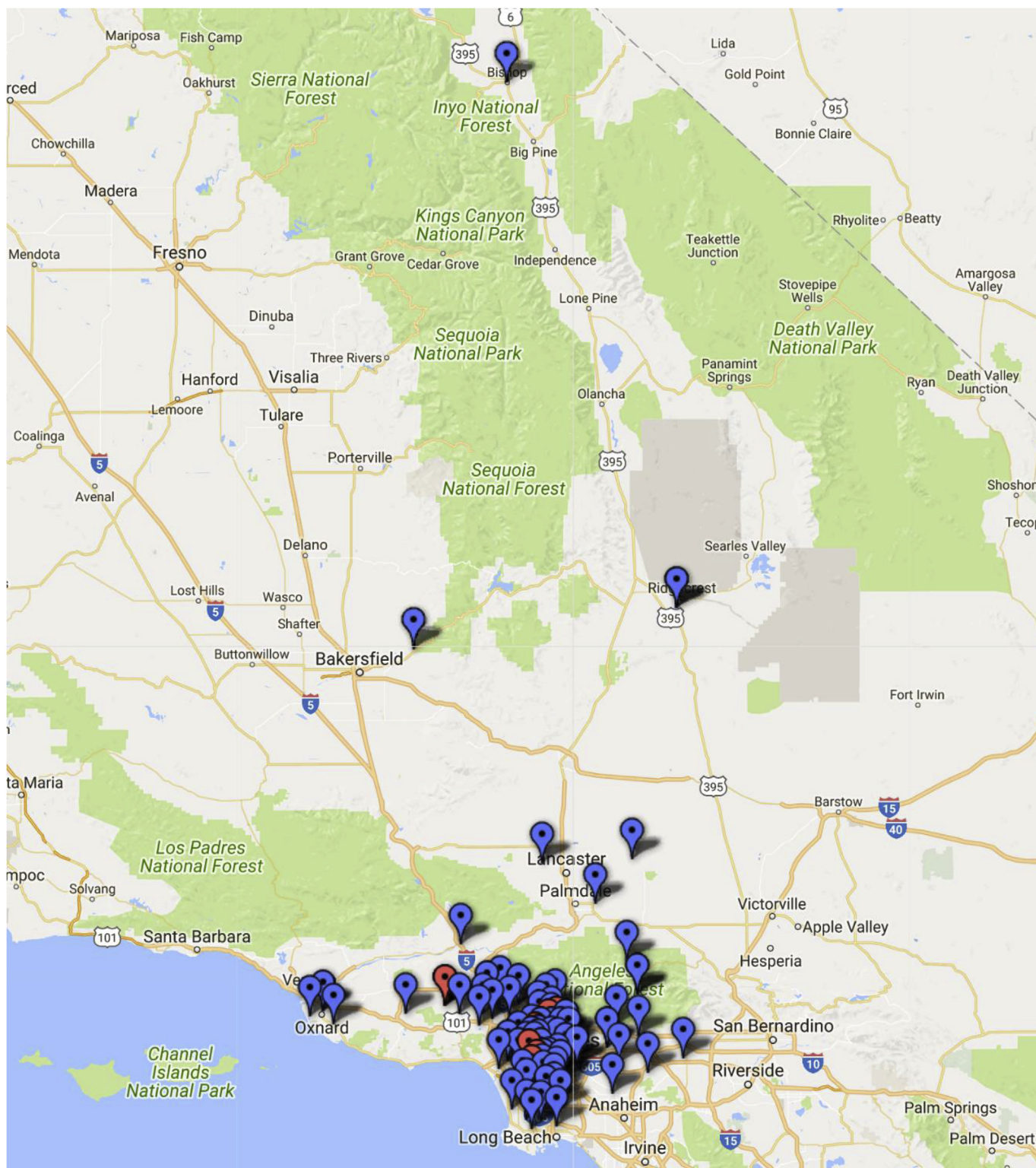


Fig. 1. Geographic Area of Residence for Neck Abscesses Removed at CHLA Over 3 years. Red = high volume zip codes, Blue = low volume zip codes. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

improvement to decrease the prevalence of neck abscesses in the adult population [9].

The distance a patient must travel to a hospital has been also associated with healthcare access. An increased distance to the closest hospital has been linked to an increase in heart attacks and unintentional injuries in adults [10]. Lack of transportation is a known barrier to healthcare for children, disproportionately affecting low income

children, which may affect their ability to obtain preventive care services or interventions before an acute infection becomes more complicated. However, no study has investigated the presence of health disparities in pediatric patients who undergo surgical incision and drainage of neck abscesses. In this study, we examine the relationship between geosociodemographic characteristics and pediatric neck abscesses in a large diverse U.S. metropolitan area. We hypothesized that

Download English Version:

<https://daneshyari.com/en/article/8806095>

Download Persian Version:

<https://daneshyari.com/article/8806095>

[Daneshyari.com](https://daneshyari.com)