Severe infections of the face: Study shows efforts should focus on early treatment

Public health efforts regarding facial cellulitis – a sometimes dangerous infection of the skin – should focus on early treatment of the condition, according to a new scientific study.

Researchers analyzed two years of national records of almost 75,000 adult patients who were hospitalized for facial cellulitis to try to determine factors that related to outcomes, such as cost of healthcare resources. The study was published in the August issue of the Journal of Oral and Maxillofacial Surgery – the official journal of the American Association of Oral and Maxillofacial Surgeons (AAOMS).

Cellulitis is usually readily treated with appropriate antibiotics and sometimes a surgical procedure. However, the authors warn that “infections that spread beyond the initial border can progress to surrounding soft tissues and bone and lead to life-threatening maxillofacial emergencies requiring hospital admission.”

The retrospective analysis showed that those facial cellulitis patients with one or more of 29 other medical conditions – such as rheumatoid arthritis, vascular or pulmonary diseases, diabetes, hypertension, cancer or obesity – had worse outcomes: higher rates of other infections (blood, fungal or bacterial), longer hospital stays and higher hospital charges.

The almost 75,000 patients who had to be admitted to treat their facial cellulitis “used a substantial amount of healthcare resources” – $1.5 billion – by being hospitalized for a total of 245,200 days in 2012 and 2013. The average hospital stay per patient was 3.3 days and cost $20,432.

The average age of these patients was 47, with about 55 percent women. About 69 percent were white, followed by 12 percent African-American and 9 percent Hispanic. Medicare (26 percent) and Medicaid (18 percent) together were the largest payers of hospitalization costs.

The study also found those with the lowest household incomes made up the largest number of hospitalizations.

Identification of those patients who are at risk to develop facial cellulitis infections would allow for early diagnosis and treatment, the authors said, potentially changing the need for hospital admissions. Early referral for an oral health evaluation is also important for mitigating the severity of facial cellulitis.

“Healthcare providers of all subspecialties should be encouraged to refer patients to dental providers for a thorough examination, especially if a patient has at least one” other medical – or comorbid – condition, the authors said.
“Depending on the severity of infection and comorbid condition, a patient could be in a compromised state. It would be ideal to identify this group of patients as early as possible to begin rapid antibiotics and perform early surgical prevention,” the researchers added.

Cellulitis of the mouth occurs more in individuals of lower socioeconomic status who are likely to have poor access to regular dental care or lack awareness of the importance of timely management of dental infections, researchers said.

The authors of “The Burden of Facial Cellulitis Leading to Inpatient Hospitalization” are Shelly Abramowicz, DMD, MPH, Assistant Professor, Division of Oral and Maxillofacial Surgery, Emory University; Sankeerth Rampa, MBA, MPH, University of Nebraska Medical Center; Veerasathpurush Allareddy, BDS, PhD, Associate Professor, Department of Orthodontics, University of Iowa; and Min Kyeong Lee, DMD, DMSc, Assistant Professor, Children’s Hospital of Los Angeles.

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