KINGELLA KINGAE BACTEREMIA IN ADOLESCENT WITH CONGENITAL HEART DISEASE

- CASE REPORT -

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BACKGROUND

- Kingella kingae*, a common coloniser of the oropharynx, is being increasingly recognized as an important invasive pathogen in children.
- Invasive *K. kingae* infections occur almost exclusively in healthy children between six months and four years of age, whereas affected older children and adolescents often have an immunosuppressing condition or heart valve disease.
- The most common clinical presentation of *K. kingae* infections in children are osteoarticular infections, occult bacteremia and endocarditis.

CASE REPORT

♀ **16 year-old**

PERSONAL HISTORY

Congenital heart disease:

Pulmonary atresia with ventricular septal defect and major aortopulmonary collateral arteries. Corrective surgery with implantation of biologic pulmonary valve one year prior to admission.

EMERGENCY DEPARTMENT

4-day history of: fever with rigors + intermittent headache + epigastric pain + diarrhea + vomiting + fatigue.

ON EXAMINATION

Hemodynamically stable, febrile and looking unwell, systolic heart murmur (preexisting), tenderness on palpation of the right hypochondrium and epigastric regions; dental cavity in a lower molar with local gingivitis. There were no signs of congestive heart failure or meningeal irritation.

WORKUP ON ADMISSION

Blood Work Leukocytosis ($13 \times 10^9/L$, 88% neutrophils), thrombocytopenia ($80 \times 10^9/L$), C-reactive protein 28,46 mg/dL, erythrocyte sedimentation rate 55 mm/h

Chest X-ray

Normal

Urinalysis

Normal

ECG

Right bundle branch block
(same as before admission)

Stool culture

Negative

T

Empirical intravenous ceftriaxone

Blood culture

Kingella kingae (susceptible to ceftriaxone)

Transthoracic echocardiogram

No vegetations

- During admission there was a progressive clinical and analytical improvement.
- Repeat blood culture on day 9 of antibiotics was negative.
- The patient was discharged after 14 days of intravenous ceftriaxone, asymptomatic.
- At 4 months follow-up, the patient remains clinically well.

DISCUSSION

- The authors would like to highlight the non-specific symptoms associated with *K. kingae* bacteremia and stress the need for echocardiographic evaluation to exclude endocarditis, since it has implications on the duration of the antibiotic therapy as well as on the prognosis.
- The gold standard for this evaluation is transesophageal echocardiogram (EC). In the clinical setting transthoracic EC is usually sufficient in children.
- The disruption of the mucosal barrier associated with gingivitis could have acted as the possible route of inoculation, promoting the *K. kingae* bacteremia in our patient.

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