

Aspecific complaints of a gastrostomy feeding tube caused by group A *Streptococcus*

Tjalling W. de Vries, Tina E. Faber

Department of Pediatrics, Medical Centre, Leeuwarden, The Netherlands

Abstract

A 7-year old girl with a gastrostomy feeding tube presented with aspecific symptoms such as discomfort and a foul smell. No cause could be found but a culture revealed group A *Streptococcus*. These were eradicated by antibiotic treatment and the symptoms resolved immediately. In patients with a gastrostomy feeding tube presenting with aspecific complaints for which a cause can not be found, a culture for group A *Streptococcus* (GAS) should be obtained.

Introduction

Feeding gastrostomy tubes are frequently used and widely accepted to provide long-term nutritional support in selected patients. Complications of percutaneously placed tubes, such as infections, are relatively uncommon.¹ Localized infections of the stoma, most often caused by gram-negative bacteria, staphylococci and streptococci, give rise to cellulitis or abscess and are characterized by redness, swelling and pain in the absence of systemic signs.² Serious invasive infections, such as necrotizing fasciitis, myositis of the anterior abdominal wall, and sepsis rarely occur.^{3,5} We describe a patient with aspecific complaints whom we believe suffered from a gastrostomy group A streptococcal infection despite the absence of signs of localized or systemic infection.

Case Report

A 7-year old girl with a psychomotor developmental delay had a gastrostomy feeding tube since the age of four years. Due to recurrent obstruction, the tube had been replaced 4 times during the first two years of use. There had been no other feeding tube related problems. At the age of seven she presented with increasing signs of localized discomfort and distress over a three month period, induced by manipulation of the tube and by tube feeding. Her parents used perfume to mask an odor coming from the

tube. Physical examination revealed a normal height for age and a normal weight for height, there were no signs of illness and she did not have a fever. On inspection of the gastrostomy tube and its insertion, there was no redness, swelling, or discharge. Initial differential diagnosis included tube obstruction, abscess and constipation. Abdominal ultrasound revealed normal passage and no signs of subdermal infection including abscess. The tube was changed, but this did not relieve the symptoms; other cleansing methods did not influence the symptoms or the smell. Treatment with laxatives and prokinetics were of no influence. A culture was taken from the insertion site and group A streptococci were yielded. The patient was treated with a ten day course of amoxicillin and all symptoms resolved promptly.

Discussion

To the best of our knowledge this is the first report of a patient presenting with aspecific symptoms caused by a localized GAS infection of a gastrostomy tube. The child expressed discomfort upon manipulation of the tube and during feeding but there were no signs of localized infection as would be expected from GAS. Associations between gastrostomy catheters and streptococcal infections have been described as post-operation wound infections after tube insertion.⁶ In our patient, the surrounding skin was normal and there were no visible signs of infection, such as redness, swelling or discharge at the insertion site. An abscess was excluded by means of an echography. A microbial cause was suspected when other etiological factors were ruled out. GAS were surprisingly found by swab culture and treatment with amoxicillin led to fast relief of the symptoms. GAS infections are caused by *Streptococcus pyogenes*, a spherical gram-positive bacterium that grows in long chains. Disease is widespread and ranges from throat or skin infections (impetigo, erysipelas, cellulitis), to life-threatening systemic disease (necrotizing fasciitis). Toxin related infections (scarlet fever, toxic shock syndrome) and post-infectious complications (rheumatic fever, glomerulonephritis) are also well known. GAS is not well known for causing aspecific symptoms. In an outbreak of GAS gastrostomy tube infections in geriatric patients, disease resulted in bacteremia, but no signs and symptoms of the tube site were described.⁵ There are related reports of GAS perineal infection characterized by aspecific signs such as local itching and discomfort.⁷ But most often peri-anal streptococcal dermatitis in children results in blood-streaked stools, erythema and abdominal pain. When patients with a gastrostomy tube present with aspecific complaints, in the absence of localized

Correspondence: Tjalling W. de Vries, Department of Pediatrics, Medical Centre Leeuwarden. P.O. Box 888, 8901 BR Leeuwarden, The Netherlands. E-mail: tjalling.de.vries@znb.nl.

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infection, physicians should be aware of GAS infection. Subsequently, when cultures yield GAS, prompt therapy with penicillin should be initiated to alleviate symptoms and prevent occurrence of invasive disease.

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