Mycoplasma pneumoniae infections with atypical developmental in children – case presentation

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Introduction Lower respiratory tract infections are considered a common cause responsible for morbidity and mortality among children, and Mycoplasma pneumoniae is identified to be responsible for up to 40 per cent of community-acquired pneumonia in children greater than five years of age [1] and also in 20% of adult cases [2]. Extrapulmonary manifestations have been reported either due to spread of infection or autoimmune mechanisms [1]. A case report on necrotizing pancreatitis was issued by Yang et al., 2015 [3].

Case 1. A 9-year old boy was admitted to our hospital presenting with an acute febrile illness lasting for four days associated with a generalised, centripetal rash and macrohaematuria. He had been previously treated with azithromycin for three days. Past medical history revealed that tonsillectomy was performed at 5 years of age and the diagnosis of hypoacusis perceptiva was made. On initial assessment he appeared well, alert and conscious. He was subfebrile (37.6°C), with a maculopapular confluented rash on the trunk and proximal parts of lower limbs. Initial investigation revealed elevated sedimentation rate (54 mm/h), leukocytosis (16.7 x 10⁹/9/L), normal hemoglobin level and normal total red cell count. The patient had slightly elevated bilirubin (total bilirubin 65.8, conjugated 44.6 μmol/L), elevated AST (342 U/L), ALT (345 U/L), and GGT (534 U/L). His renal function and electrolyte panel was normal. Chest X-ray was normal without any lesions in the lungs. Urine investigation revealed macrohaematuria, proteinuria with active urinary sediment (dysmorphic erythrocytes and erythrocyte casts). On ultrasound kidneys were enlarged with hyperchogenic parenchyma, diminished corticomedulard differentiation. Because of proteinuria (total protein 2829 mg/24 hours, albumin 1394 mg/24 hours), and hematuria, kidney biopsy was performed. On light microscopy we found mesangic hypercellularity, interstitial fibrosis and tubular atrophy (focal). On IF microscopy the GBM was of variable width (113 to 670 nm, average 303 nm, SD 164). In the thicker part of GBM lamellation was present. Podocytes were normal. The pathohystologic exam was consistent with Alport syndrome. Mycoplasma serology was consistent with acute infection, with Mycoplasma IgM positive (26.3 U/mL), and negative IgG.

Case 2. A 15-year old male adolescent was admitted to hospital with symptoms of abdominal pain lasting for two weeks, with no nausea or vomiting, and normal stool passing. The boy was living with his mother, who had been diagnosed with neurofibromatosis, in an atypical family situation of divorced parents.

Physical examination showed abdominal pain in the left upper quadrant, also spreading to the back and lumbar region. Initial laboratory analysis showed a slight increase in serum amylase (140 U/L) and lipase (518 U/L). The C-reactive protein was inside referent range (2 mg/L) as were the value of liver enzymes (AST, ALT, GGT). The TSH was inside referent range, and the antibodies related to gluten enteropathy were negative. On ultrasound kidney biopsy was performed. On IF microscopy there was a poorly expressed granular deposit of IgM on the glomerular basement membrane (GBM) with no IgA, IgG, C1q, C3 and C4 immune deposits. On electron microscopy the GBM was of variable width (113 to 670 nm, average 303 nm, SD 164). In the thicker part of GBM lamellation was present. Podocytes were normal. The pathohystologic exam was consistent with Alport syndrome. Mycoplasma serology was consistent with acute infection, with Mycoplasma IgM positive (26.3 U/mL), and negative IgG.
Refeeding syndrome (RFS) describes potentially fatal shift in electrolytes in severe malnourished patients receiving rapid and excessive food re-introduction. It is a result of hormonal and metabolic disturbances.

There are various clinical and laboratory features with hypophosphatemia being the most common one. Elevation in liver function tests is also frequently seen. Patients with anorexia are a high-risk group for developing RFS. The aim of the study was to investigate the incidence and clinical features of RFS among hospitalized patients, as well as severity of malnutrition (Z-score, BMI).

This study is a retrospective analysis of medical documentation of patients diagnosed with anorexia nervosa (restricting (ANRT) and binge eating/purging (ANBP) subtype), eating disorder NOS (EDNOS) and avoidant/restrictive food intake disorder (ARFID) who were admitted to our Centre for eating disorders in children and adolescents during a 5 year period (2014-2018). We analyzed the age, gender, duration of the disease before admittance, anthropometric data (BMI and Z-score), average weight loss, the need for nasogastric (NG) tube feeding and phosphate supplementation. For statistical analysis we used t-test.

256 patients (232 female) aged 6-20 years (median 15+/−2.06) of which 43% were diagnosed with ANRT, 10% ANBP, 8% ARFID, 39% with EDNOS were included in the study. The average duration of the disease at the time of admittance was 13.25+/−13.43 months. Average BMI Z-score was -1.97+/−1.63 average weight loss was 20+/−9.76% initial body weight (IBW).

Hypophosphatemia was found in 15.6% patients, of which 65% received phosphate supplements by oral or intravenous route depending of phosphate serum concentration. Elevated liver enzymes due to RFS were found in 9.3% of patients. In total RFS in some form developed in 23% patients.

Average BMI Z-score of patients that developed RFS was -2.6+/−1.89, average weight loss was 23.9+/−9.85% of IBW. Both variables were significantly different (p<0.05) in comparison with non-RFS group which had BMI Z-score of -1.76+/−1.47 and average weight loss of 18.7+/−9.3% of IBW. The average duration of the disease was similar in both groups (13 months) (p=0.84).

NG tube feeding was needed in 27% of all patients, 24% patients in non-RFS group and 37% in patients with RFS.

Our study reported that even in controlled hospital conditions and with careful realimentation RFS has a high incidence. We found statistically significant difference when it comes to BMI Z-score and average weight loss between two groups of patients.