SUCCESSFUL UTILIZATION OF DAPTOMYCIN IN TREATING A CHILD WITH ENDOVASCULAR INFECTION. CASE REPORT AND LITERATURE REVIEW

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Learning objectives Present the successful utilization of daptomycin in a child and provide a literature review on the use of daptomycin in treatment of MRSA endovascular infection in children

Case summary 13 years old male previously healthy shifted to our hospital from another facility with one week history of right knee trauma after which he developed sepsis and respiratory distress requiring intubation. In our hospital he was found to have bacteremia, septic arthritis, pneumonia and empyema to be due to MRSA. He was also found to have huge emboli in the right pulmonary and right femoral vein which were deemed to be septic emboli. He was initially covered with vancomycin, Gentamicin and Rifampin. The patient later developed Acute Kidney Injury and his Vancomycin levels were erratic and hard to control. His antimicrobial therapy was then shifted to Daptomycin with excellent recovery and outcome.

Methods Case report and literature review

Discussion We believe that this is the first pediatric case in the region to be successfully treated by Daptomycin. In reviewing the literature, use of daptomycin in pediatrics is very limited world-wide. No regional data on its use could be identified through our literature review. The safety, efficacy and pharmacokinetics of daptomycin are not well established in children and therefore using it off-label should be limited to situations when other options are not feasible. In our patient daptomycin was successfully utilized in treatment MRSA endovascular infection without toxicity.

AUTISM AND VITAMIN A – THREE EYE-CATCHING CASES

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Background We describe 3 cases of young children with Autistic Spectrum Disorder (ASD), who presented with severe visual impairment as a result of vitamin A deficiency, due to highly restrictive diets. A recent study ‘Autism Counts’ by Sweeney and Staines, found the prevalence rate of ASD of 1.0% in the Irish population. Vitamin A deficiency is the most common form of malnutrition leading to ocular disease, and the leading cause of childhood blindness worldwide. Vitamin A deficiency is common in the developing world but is a rare occurrence in our population. In developed countries, the diagnosis of malnutrition leading to eye disorders may be missed or delayed due to its rarity.

Ninety percent of children and adolescents with ASD experience more problems with feeding compared to their peers, including a limited food selection often related to aversion and food refusal secondary to sensory disorders. Avoidant/Restrictive Food Intake Disorder (ARFID) is unfortunately common in children with moderate to severe ASD and therefore these children are vulnerable to developing nutritional deficiencies.

The Cases The 3 cases presented with a combination of symptoms including intolerance of bright lights, blinking, dry eyes, conjunctival redness and parental concerns of reduced vision. They all had severely restricted diets yet 2 of our 3 patients had growth centiles within the normal healthy range. Vitamin A deficiency was diagnosed on ophthalmology examination and supported by biochemical measurement. Examination demonstrated hazy corneas, xerophthalmia, Bitot’s spots and irreversible optic atrophy, all known signs of vitamin A deficiency. Interestingly skull bony thickening was noted in 2 of the 3 cases. This warrants further explanation as it has yet to be reported in children with vitamin A deficiency.

Treatment included a combination of topical, oral and intramuscular vitamin A administration. Two of our 3 patients have irreversible visual impairment secondary to vitamin A deficiency.

Clinical Lessons From These Cases

Evaluation of a child with ASD should include a detailed nutritional history. Children with a normal weight (or overweight) can have a severe nutrient deficiency. Therefore it is important when taking a nutritional history to include the major food groups, vitamins and nutrients in children with ASD.

Any eye symptom must prompt an urgent ophthalmology assessment.

Consider a visual cause with a change in behaviour or school performance in a child with ASD.

A CASE OF VAN DER WOUDE SYNDROME

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Vander Woude syndrome (VWS) is an autosomal dominant congenital syndrome characterised by a cleft lip or palate and distinctive pits of lower lips. The degree to which individual carriers of the gene are affected widely varies within families.

Introduction VWS comprises of cleft lip or palate and pits in lower lips. The responsible mutation has been identified in interferon regulatory factor 6 gene and the majority of cases have been linked to deletion in chromosome 1q32–q41.

Case report A 3 year old girl born at 36 weeks gestation who initially required admission to special care baby unit for four days for respiratory distress and feeding issues. She was referred to paediatric outpatient at the age of 8 months with chronic cough and noisy breathing. On examination she had noisy breathing, skin dimples on her chest akin to accessory nipples and extra tissue on lower lip resembling pits. She underwent adenotonsillectomy for obstructive sleep apnoea at the age of 2 years. A genetic blood test for Vander Woude syndrome was positive with heterozygous deletion exons 3–9. Her motor delay was improved with physiotherapy but still exhibits speech delay. Intra-oral examination showed eruption of 12 teeth with unusual order and delay in tooth eruption. She is also showing significant behaviour problems as well.