ELECTRONIC AID TO DIAGNOSIS AND MANAGEMENT OF CHILDHOOD UTI: BASED ON CURRENT UK (NICE) GUIDELINES

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Background and Aims: The National Institute for Health and Clinical Excellence (NICE) in UK has recently published a clinical guideline on the diagnosis, treatment and long-term management of urinary tract infection (UTI) in children. UTI in infants and young children is of peculiar importance because it can cause acute significant morbidity and long-term medical problems, including hypertension and impaired renal function.

The full NICE guideline is a 178-page documentation designed to lead to more consistent clinical practice among different practitioners caring for children with suspected UTI. It offers guidance on diagnosis, effective investigations, treatment and follow-up.

Methods: We have design an easy-to-use, user-friendly desktop windows application for the health practitioners based on the NICE guideline as a quick reference for the management of children with suspected UTI. The software is intuitively easy to use and requires no advanced computer skills.

Results: The software provides an easy navigation system based on the main contents of the NICE guideline: history, urine sample collection and testing, treatment, investigations and information for patients/carers. It aids selection of appropriate radiological investigation depending on the clinical status and age category of the patient. It offers guidance on choice of antibiotics, duration of treatment, requirement for specialist follow-up and information to be given to patients and their carers.

[Fig1]

Conclusion: We have designed an easy-to use simple electronic assistant based on the current NICE guidelines (UK) on the diagnosis, treatment and long-term management of UTI in children.

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PSEUDOHYPOALDOSTERONISM TYPE 1, RENAL FORM- A CASE REPORT

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Pseudohypoaldosteronism type 1, autosomal dominant renal form is a rare genetic disorder.

We report a case of pseudohypoaldosteronism / PHA/ type 1 that presented as severe salt wasting on the 20-th day of life. Initially it was appearing like congenital adrenal hyperplasia /CAH/. The baby was with severe dehydration, hyponatremia, metabolic acidosis and normokalemia. Poor response of the dehydration and electrolyte abnormalities to steroid therapy should make one suspect PHA. Diagnosis was established by demonstrating the greatly increased values of plasma renin activity and plasma aldosterone concentration and normal 17-OH progesterone and cortisol. The child was treated with sodium chloride and alkali therapy with sodium bicarbonate supplements. This patient

illustrates one of the most severe clinical features of this uncommon disorder. It should be suspected in critically ill babies with severe dehydration and hyponatremia. The condition is life threatening required intensive care and long lasting adequate sodium chloride and bicarbonate with or without antipotassium supplementation.

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PERCUTANEOUS TRANSLUMINAL ANGIOPLASTY IN A CHILD WITH RENAL ARTERY FIBROMUSCULAR DYSPLASIA

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Renovascular disease is an important cause of hypertension in children and is associated with considerable increase in the risk of morbidity and mortality. In 70% of all cases of secondary hypertension in children, the cause is fibromuscular hyperplasia with most commonly affected renal and carotide arteries.

We observed 12 yrs old girl presented with headache. High grade arterial hypertension has been registered. She has been referred to our hospital because of refractory hypertension under treatment with triple antihypertensive therapy including ACE inhibitor+beta-blocker+thiazide. CT angiography has shown stenotic and aneurismatic lesions of the lower branch of left renal artery. Percutaneous transluminal renal angioplasty has been performed of the stenotic part of the renal artery. Blood pressure dramatically decreased after operation and stay normal during the follow-up period of 2 years. Antihypertensive drugs dosage gradually decreased and than stopped. The girl is stable without any complications. Percutaneous transluminal angioplasty is the first line therapeutic approach in renovascular hypertension. It is definitive, safe and low-cost treatment modality especially in young patients with refractory renovascular hypertension due to fibromuscular dysplasia.

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DIALYSIS IN ACUTE RENAL FAILURE OF HEMOLYTIC UREMIC SYNDROM IN CHILDREN

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HUS is known as the most common cause of ARF in previously healthy children. In the absence of a proven specific therapy the treatment is intensive supportive care. Dialysis is the major method of therapy.

The study objectives were to identify the correlations between the type of HUS and short or long term prognosis depending of the method of dialysis, to analyse the risk factors for poor prognosis, the mortality rate and complications.

The clinical retrospective and prospective study is based on 33 cases of HUS admitted in the Department of Dialysis of "Grigore Alexandrescu" Emergency Children Hospital Bucharest from 1997 to 2009.

The lot of study was omogenous, media of age 34 month; almost half of patients(54,5%) were infants. The severity of the disease was 1,96 times higher in infants than other groups of age. 81,8% were D+HUS; 94% had dialysis, peritoneal dialysis(PD) was the preferred modality (60,6%). Mortality rate was 21,2%.

The precocity of dialysis eliminate ARF as cause of death in HUS. Good prognosis factors were: D+HUS, anuria less than 7 days, precocity of dialysis, the absence of complications. Poor prognosis factors were: infant age, MODS, ventilatory support and cerebral hemoragy. The precocity of diagnosis and dialysis in HUS lead to a great survival rate in acute phase of HUS. The key of success therapy in HUS is maintaining the hydroelectrolytic, acidobasic and nutritional balance, precocity of dialysis, aggressive control of hypertension and anemia. The major interest is recently moving to the long term prognosis of HUS.