Case Report The index is a 2.5 year old girl with moderate eczema associated with nocturnal itch. She was referred to local services and was trialled on topical Clobetasone and Betamethasone cream. After little improvement this was changed to topical Hydrocortisone (1%) and Betamethasone cream. Her parents applied the steroid cream on a continuous basis for at least four months. They also sourced different homeopathic creams from Pakistan. Upon analysis of their ingredients in the laboratory, Betamethasone and Dexamethasone were identified in one of them. She required a 5 day course of oral Prednisolone for an allergic reaction to nuts. Four months later, the eczema remitted but all treatments were continued. After six months, she presented with rapid weight gain over a 2 month period [weight >98th centile]. This was associated with increased skin pigmentation over ankles and knees, striae over her thighs and marked hypertrichosis.

Biochemical testing confirmed absence of diurnal variation with suppressed 8am cortisol levels. She was switched to maintenance eczema care with emollients and topical Tacrolimus. An ACTH stimulation test confirmed adrenal suppression [peak Cortisol 45nmol/L]. Adjunctive investigations for other causes of hypoadrenalism were reported normal. We educated the family on emergency management of cortisol deficiency and prescribed steroid replacement for emergency use only. After four weeks off all steroid containing medications, a repeat ACTH stimulation test confirmed normalisation of adrenal function [peak Cortisol 550nmol/L]. Four months later, she has regained normal cortisol levels [75–91st centile] and her eczema has remained under control. The pigmentation and striae have faded and her hypertrichosis is no longer evident.

Discussion The role of corticosteroids in the management of inflammation is well established but has resulted in widespread, prolonged and often unsupervised use. There is inter-individual variation in steroid sensitivity, small doses can result in dramatic adverse effects. We did suspect that the homeopathic medicine was steroid based. This does not rule out the possibility that the other ingredients facilitated steroid increased absorption or reduced metabolism.

Conclusion Adrenal suppression is a rare side effect of topical steroid use. Children on courses of steroids for longer than one week require medical monitoring to ensure that the treatment is appropriate, safe and used correctly.

P289 METABOLIC COMPLICATIONS OF OBESITY IN CHILDREN

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Introduction Children with obesity have high risk of metabolic complications.

Aim To reveal frequency of metabolic complications in children with obesity.

Methods We examined 91 obese children, aged 7–17 (BMI > 95 percentile). Mean age of children was 12.46 ± 3.5 yrs. Obesity in children manifested at 5.3±0.5 yrs. Family anamnesis characterized by obesity in 71%, diabetes type 2 - in 25%, hypertension - in 53% in the first degree relatives. All patients were examined by clinical, biochemical, ultrasound methods. An oral glucose tolerance test (OGTT) accompanied by four point of insulinemia was performed. HOMA index was calculated according to the standard formula. In children with fatty liver chronic hepatitis were excluded. Metabolic syndrome (MS) was diagnosed according to a classical definition (Weiss’s criteria).

Results In obese children metabolic complications were found in 39.6%. The prevalence of the metabolic complications was follows: hypertriglyceridemia 38.2%, glucose intolerance 17.6%, hypertension 52.6%. Increase of serum cholesterol was revealed in 24%, low density lipoproteins - in 14%, decrease of high-density lipoproteins – in 32% children. Metabolic syndrome was found in 18 (19.8%) patients with BMI 30.9 ± 3.4 kg/m². Insulin resistance revealed in 25% children. HOMA index was 4.6 ± 3.3 mIU/L. Ultrasound signs of fatty liver were shown in 40 patients.

Conclusions This study showed a high prevalence of metabolic complications among obese schoolchildren.