USE OF GLP-1 ANALOG IN A PATIENT WITH PRADER-WILLI SYNDROME

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Introduction Prader-Willi syndrome (PWS) is a rare genetic disease caused by deletions or imprinting defects in the region 15q11-q13 leading to hypothalamic-pituitary dysfunction, hyperphagia with excessive weight gain and behavioral disorders. Obesity is a hallmark of PWS, with consequently high incidence of impaired glucose tolerance and type 2 diabetes (T2D), particularly after puberty. Liraglutide, glucagon-like peptide 1 (GLP-1) analog is efficient in treatment of T2D, but results regarding body weight and BMI improvement. The treatment with GLP-1 analogs seems to be safe and effective option for therapy of T2D in PWS. Further studies are necessary to confirm preliminary results and establish the guidelines for use of GLP-1 agonists among PWS patients.

Multiple endocrine neoplasia Type2b (MEN2b) is a rare familial syndrome caused by autosomal dominant mutations in the RET protooncogen. Patients with MEN2b suffer from aggressive form of medullary thyroid cancer (MTC), pheochromocytoma, multiple mucosal neuromas, gangliomatosis of gastrointestinal tract, and a marfanoid habitus, whereas hyperparathyroidism is exceedingly rare.

Aim To present a patient with MEN2b, diabetes mellitus type 1, situs viscerum inversus and hydronephrosis with megacystis-megaureter syndrome and explore possible etiologic associations between those entities.

Case Report Our patient was born from a normal pregnancy, at term. Fetal ultrasound imaging ‘in utero’ revealed bilateral dilation of ureters (megaureter), hydronephrosis, duplicated ureters, and situs inversus. On the 2nd day of life bilateral percutaneous nephrostomies were inserted. At the age of two years right upper pole heminephrectomy for ectopic ureter and antireflux surgery of the lower ureter were performed. He has been followed-up by pediatric surgeon and nephrologist. Kidney function was normal, he didn’t show any symptoms and didn’t require any treatment. At the age of 7 years he was diagnosed with type 1 diabetes. When he was 11,5 years old, during regular follow-up visit, an ultrasound examination of the thyroid gland revealed suspicious nodule and brought to attention an unusual appearance of the patient: thick, prominent lips with submucosal nodules, marfanoid body habitus, musculature weakness and hypotrophy, high arched palate- suggesting MEN2b syndrome. Laboratory evaluation (high calcitonin level) and pathohistological examination of extirpated thyroid confirmed metastatic medullary thyroid carcinoma. Molecular genetic analysis found RET-proto-oncogene patogenic variant: c.2753T>C (p. Met918Thr) confirming MEN2b syndrome. There were no signs of pheochromocytoma.

Conclusion To the best of our knowledge there are no reports on association of MEN2b and type 1 diabetes or reversed position of major visceral organs. However, there are scarce reports on kidney malformations in patients with MEN2b. Acknowledging a recognised role of RET gene in kidney development, we suggest that kidney malformations might be a feature of MEN2b syndrome that should be looked for.