Radiologic study of the craniovertebral malformations in pituitary duplication

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Some congenital malformations are so rare that any new case should be described in detail. We had the opportunity to examine a patient with the hypogonadism, obesity, and some limitation of the neck rotation. The T1-weighted magnetic resonance imaging (MRI) of the brain showed two pituitary glands, each of them with its own pituitary stalk. In addition, the region of the median eminence, i.e. the posterior part of the tuber cinereum and infundibulum, was thicker than usual and was fused with the mammillary bodies. Just left to the fusion, a small suprasellar hamartoma was noticed. The multislice computerized tomography (MSCT) presented a double hypophyseal fossa, the posterior clinoid process, the odontoid process and the axis body, as well as a broad clivus, an inverse foramen magnum, the third occipital condyle, a foramen transversarium defect, a partial agenesis of the anterior and posterior atlas arches, and a fusion of the first four cervical vertebrae. The third condyle measured 12.9 mm × 10.8 mm. The gap between the right and left remnants of the anterior arch measured 22.7 mm, and the missing middle part of the posterior arch had a transverse diameter of 26.1 mm. The right and left odontoid processes were 7.7 mm and 8.6 mm in height, respectively, and the cleft between their apical parts measured 3.7 mm in the transverse direction. Since our patient is one of only 40 reported individuals with a pituitary duplication in the last 150 years, the case description is of a great scientific and clinical significance.

Biography

Slobodan Marinković has completed his PhD at the age of 31 years at Belgrade University and postdoctoral studies at the Laboratory of Neurophysiology, Panum Institute in Copenhagen (Denmark). He has published 2 international books, four chapters in 2 other books, 8 national books, more than 60 papers in reputed journals and has been serving as an editorial board member of repute. He has about 1200 citations in international publications. He has given 16 lectures at various international congresses and universities as an invited speaker and has been a chairman person on three occasions.

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