

Congenital anomalies of the human vertebral column

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Introduction

Congenital spinal deformities are associated with an anomalous vertebral formation and segmentation. In most cases, such anomalies are detected only with an X-ray examination of scoliosis.

Aim of study

To evaluate the possibilities of computed tomography (CT) for the detection of congenital spinal anomalies.

Materials and methods

CT scans of the 5 patients from «Republican Scientific and Practical Centre for Traumatology and Orthopedics». Axial, multiplanar and 3D reconstructions were analyzed using imaging software.

Results

All 5 patients had scoliotic deformations of the spine in the thoracic region. Butterfly vertebrae were revealed in the thoracic region with a median slit in the bodies of Th6, Th8, Th9, Th10 and Th11. Other congenital anomalies such as hemivertebra and block vertebra were found together with the butterfly vertebrae. In some cases fusion of the transverse processes and ribs (intercostal block) and spina bifida posterior were revealed.

Conclusions

Computed tomography is an informative method for detecting congenital anomalies of the spine. The total sagittal cleft was found out in 4 cases from 5 butterfly vertebrae. In 1 case the cleft was incomplete. Together with the butterfly vertebra the other congenital anomalies of the development of vertebral column were revealed.