Dear Editor-in-chief,

Cervical spine anomalies are a common cause of fixed torticollis in young patients. In 50% of cases, they are part of the Klippel-Feil syndrome, in which the anomalies lead to the clinical triad of short neck, low posterior hairline, and limitation of neck range of motion. The cervical spine anomalies can also be isolated, as e.g. in athletes. These anomalies are often asymptomatic, but can be associated with a number of conditions that may be lethal for athletes. Screening for these conditions will only be performed if sportphysicians are aware of this problem. In athletes with fixed torticollis orthopaedic, cardiac, ear-nose-throat and nephrologic examinations are mandatory. Radiographs should include AP and lateral views to illustrate segmentation or formation defects of the cervical spine (Figure 1.).

Fixed torticollis is associated with congenital thoracic or lumbar scoliosis in up to 50% of cases. Radiographs of the thoracic or lumbar spine are necessary to decide on conservative or surgical treatment.

Besides musculoskeletal abnormalities, a number of other conditions may coexist with fixed torticollis (Hensinger, 1991; 2009; Kirmo et al., 2007). Thirty % of patients may experience hearing problems, necessitating referral to an ear-nose-throat specialist.

The incidence of associated congenital cardiac disease ranges from 4% to 29%, which should be kept in mind when dealing with athletes. Various lesions can occur, but ventricular septal defects are the most common (Nagib, 1984). Cardiac assessment (ECG and ultrasound) should be performed to identify contraindications to sports participation.

Renal abnormalities may also be a component of fixed torticollis (35%). Agenesis is most common, but malrotation, horseshoe kidney, or ectopic kidney may be present (Moore, 1975). No data exist on the relationship between unilateral renal agenesis and sports.

In conclusion, congenital cervical abnormalities are often asymptomatic in athletes and discovered incidentally. However, sports physicians must be aware of potentially life-threatening associated anomalies and referral to an orthopaedic surgeon, cardiologist, nephrologist and ear-nose-throat specialist is mandatory. Cardiac assessment is necessary to identify contraindications to sports participation. A careful evaluation of the cervical anomaly is essential to guide the sports physician in the decision process regarding the safety of engaging in athletic activities.

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References
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