

THE 'KStahl' SIGN: AN AID FOR THE DIAGNOSIS OF HSD

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INTRODUCTION

In order to make HSD recognisable in the case of amputation of one or multiple limbs, we developed the KStahl sign as a supporting instrument for the diagnosis of HSD.

The starting point was the fact that the commonly used Beighton Score as a measuring method fails when extremities are no longer present.

If one follows the description in the conservative medical literature, the two sacroiliac joints can only move by a few millimetres. According to our findings, however, in the case of HSD, the amphiatetic sacroiliac joints can be shifted up to 2 cm and even more in the direction of superior and inferior (less in the anterior and dorsal direction). This in turn makes walking and standing more difficult, is extremely painful, and, ultimately leads to increasing symptoms in other hypermobile/unstable joints cranial and caudal of the sacroiliac joints. This can occur on one or both sides of the sacroiliac joints

METHOD

A wooden plate of 30 cm length, 15 cm width and a thickness of 1.5 cm serves as a measuring instrument for the KStahl sign.

The test can be carried out in both standing and sitting positions, but the test must always be performed on both sides.

The patient stands with one foot on the wooden plate, and the testing person (e.g. physician or therapist) determines the displaceability of the right and left side in the caudal to cranial direction (or in the opposite direction) by palpation of the rear two upper iliac spines (spina iliaca posterior superior).

Patient 43 years old is amputated on both feet and hands toes and fingers after electrical accident. With Beighton Score (without finger tests) he has 4 points positive and on the right side a positive KStahl sign



While sitting, the patient must touch the wooden plate with one half of their body (the pubic bone hump). If a displacement of the iliosacral spines in the sacroiliac joints of at least 10 to 15 mm from cranial to caudal (or in the opposite direction) is tested positive, an HSD can be diagnosed.

In case of tilt, this can be ruled out and requires further testing for a Trendelenburg sign. Corresponding tests are regularly carried out by us according to the KStahl sign. If the KStahl sign has been tested positive, we usually also find positive Trendelenburg signs on one or both sides.

The KStahl sign is mentioned by name for the first time in the OT 08/ 2020 journal in the article "*Complications when controlling lower limb prostheses in persons with Hypermobility Syndrome*". <https://360-ot.de/komplikationen-bei-der-ansteuerung-von-prothesen-der-unteren-extremitaet-bei-hypermobilitaetssyndrom/>

OUTCOMES

We have been able to successfully use the method we have developed to diagnose a possible HSD in over 500 patients with physical abnormalities and pain or chronic pain, as well as 108 amputees.

CONCLUSION

In HSD patients, the muscles do not find a strong opponent in the patient's long tendons.

In our opinion, a positive KStahl sign influences choice of therapy including supply of aids and manual therapy in order to reactivate the muscles in their original function.

We recommend an MCT System aid supply and the MCT Therapy for reactivating the pelvic muscles. www.mctsystem.com

References

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DECLARATIONS OF INTEREST

The MCT System (Muscle Control Therapy System) is an international project in the field of orthopaedic technology that has developed aids for people suffering from HDS and EDS over many years. Initiator and project manager Kristin Stahl, master orthopaedic technician, has thus created basic prerequisites and possibilities for a treatment that is specially tailored to the needs of hypermobile patients.