



Hip sonography in Hungary

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Abstract

The diagnosis of hip dysplasia has developed very differently in different countries over the last few decades. The development and current situation in Hungary is described in this paper. The Ortolani test is still the gold standard for clinical examination in most regions. Hip sonography is not officially established and is only used occasionally. However, thanks to private initiatives, more and more orthopaedic surgeons are now familiarising themselves with this method and the first courses are being held in accordance with International Interdisciplinary Consensus Committee on DDH Evaluation (ICODE) guidelines. A regional screening with Graf hip sonography was carried out in Szeged. The results of the evaluation impressively demonstrate the efficiency of this method.

Keywords

Hungary, hip, sonography, Graf, dysplasia

History

The situation in Hungary never was clearly regulated; the diagnosis of hip dysplasia has always been carried out by means of clinical examination (usually with the Ortolani test). All ultrasound examinations, if any, took place in the 12th week of life. In 2018, a regulation recommended that this examination should be carried out in the sixth week of life, but this was only slowly recognized in wider circles.

In recent years, however, there has been a tendency for orthopaedic surgeons, especially paediatric orthopaedic surgeons, to perform hip sonography more generously. Until now, examiners have learnt the technique either by attending courses abroad or through practical instruction from more experienced colleagues.



Current situation

This compilation summarises the current situation as a result of a survey of various institutions and colleagues in Hungary in order to determine the current situation. It shows that dysplasia diagnostics are still handled very differently in Hungary. It largely takes place during the initial examination after birth, is usually carried out by the neonatologist or paediatric orthopaedist and is generally limited to the medical history and clinical examination. The Ortolani test is still the gold standard.

A second examination of the infant is then carried out at the age of 4–8 weeks, again clinically.

In general, hip sonography is not regulated by the state in Hungary. It is primarily individual radiologists and orthopaedic surgeons who offer this examination in larger hospitals, but also in private institutes. The quality of examinations varies. In Hungary, there is currently no special professional organisation for sonography alone; this speciality is integrated into the Radiology specialist group.

There are no official courses, but there have been qualified private courses in Csólyospálos since 2012 and in the 'Heim Pál' Paediatric Clinic in Budapest since 2023. These courses are based on the guidelines of the International Interdisciplinary Consensus Committee on DDH Evaluation (ICODE) consensus paper [1]. The quality of the examinations is constantly improving thanks to qualified courses.

The Rotary Club Danubia Csólyospálos, based in southern Hungary, launched a project in 2015 to promote sonographic hip dysplasia diagnostics by providing financial and personnel support for training courses for doctors, but also by providing used ultrasound equipment to institutions that perform hip sonography competently.

Results

A scientific study has also been carried out in Hungary. From 2012 to 2017, hip screening with ultrasound was carried out in the neonatal ward of the Szeged University Women's Hospital within the first three days of life of babies born there. The results of the first year (September 2012 to August 2013) were analysed and published [2].

On the occasion of the 1st US examination, which took place in the first 1–4 days of life, the authors found positive findings in 70 of the total of 3,272 hips examined (2.14%), with the following subdivision according to Graf categories: type II C: 21 hips (30.0%); type D: 24 hips (34.28%); type III: 24 hips (34.28%); type IV: 1 hip (1.44%). With regard to risk factors, female gender, breech presentation and a positive family history proved to be significant. Interestingly, 50.90% of newborns with developmental dysplasia of the hip had neither positive physical signs nor any risk factors other than being female. Sensitivity (20.0%) and specificity (98.34%) were calculated for the physical examination. In contrast, early universal hip US screening was able to diagnose all cases of hip dysplasia. The authors concluded that hip ultrasonography is an effective preventive measure in orthopaedics.

In the Szeged region, where the screening was carried out, no more operations for dysplasia have been necessary since then. In contrast, there are reports from other regions without screening that operations were still necessary.

Recommendations

It would be very welcome if the public health authorities were to address the problem of early detection of hip dysplasia. In Hungary, too, the most comprehensive sonography screening possible should be introduced at the earliest possible stage of infants' lives. At the same time, enough specialists should also receive adequate training in sonographic examination techniques. The training should be combined with organized quality control.

Declarations

Author contributions

BD: Conceptualization, Investigation, Validation, Writing—original draft, Writing—review & editing.

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The author declares that he has no conflicts of interest.

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References

1. O'Beirne JG, Chlapoutakis K, Alshryda S, Aydingoz U, Baumann T, Casini C, et al. International interdisciplinary consensus meeting on the evaluation of developmental dysplasia of the hip. *Ultraschall Med.* 2019;40:454–64.
2. Gyurkovits Z, Sohár G, Baricsa A, Németh G, Orvos H, Dubs B. Early detection of developmental dysplasia of hip by ultrasound. *Hip Int.* 2021;31:424–9.