Possibilities of minimal invasive treatment of hips displacement in children with cerebral palsy

Hips displacement is one of the main problems in children with cerebral palsy behind pes eqinus. Without treatment we see a progression of about 7% per year (Terjesen et al 2006). Main cause beside belayed verticalisation is pathologic muscle drawing of hip surrounding muscles (Flynn et al 2002, Cornell et al. 1995, doll et al 2006). Mostly concerned are children with restricted possibility of walking and standing self-contained, which is graded with the gross motor function classification system.
It is common to stabilize muscle imbalance with soft tissue balancing in young age. Here we prefer percutaneous myofasziotomie to lengthen short muscle. The iliopsoas muscle must be lengthen with an mini-open access.
In 99 hips observed for in mean 4,2 years in children with GMFCS 3-5 under 6 years we found an improvement of hip displacement in 33%, a worsening in 5% and a stabilization in 62% as reported in Congress Focus CP 2019.
As muscle lengthening is not sufficient enough in risky hips in older patients, we use additional growth guiding as a minimal invasive method to prohibit further hip displacement. Therefore two studies could show a positive effect (Lee et al 2016, Portinaro et al 2016). In our patients we found in 16 hips an improvement of migration index of 5% and an improvement of femoral neck ankle of 9° within 16 month mean follow up as we reported in 2018 during the congress for orthopaedic child surgery in Dresden. Further studies must show the efficiency of this method.