Pain appearance after spastic hip dislocation treatment - comparison between palliative and reconstructive treatment

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INTRODUCTION

Various pain assessment of the CP patients have been presented in literature:

- All 65 children with pain had pain of neuro-orthopedic origin (...). The most frequent pain sites were the hips (43.4%) and the feet (26.9%). [1]
- Spastic hip dislocation reduces quality of life (QOL) and decreases participation. [2]
- Luxation is also associated with seating problems because of hip adduction contractures and with problems of perineal hygiene. [3]
- Hip pain was significantly more frequent in hips with MP more than or equal to 50 % in children with spastic quadriplegia, and in those with Gross Motor Function Classification System level V. [4]
- Muscle forces combined with acetabular dysplasia, if not corrected early, lead to dislocation and degenerative changes in the femoral head. [5]

The main objective was to present incidence of pain complaints before and after open reduction or palliative treatment of spastic hip dislocation in CP children.

METHODS

- Radiological evaluation based on standardized A-P X-ray of the hip joints before and after surgery.
- Pain severity was measured by VAS-11 before the surgery and at the last follow up.
- Parents or caregivers were asked about child pain during: sitting, perineal care and rest.

RESULTS

1. In all groups of patients we observed decrease of pain complaint (fig. 1). The observed reduction of pain was:
   - 1st group: from 3 (1 - 10) to 2 (0 - 8)
   - 2nd group: from 8.1 (3 – 10) to 0.7 (0 – 5)
   - 3rd group: from 7 (2 – 9) to 1.4 (0 – 5)

2. Observed changes concerned mostly sitting position and perineal care.

3. In second group 4 parents would not recommend the same treatment in the third group only 1 parent.

4. Complication rate was:
   - 1st group: 8 cases/50 hips: 6 redislocations and 2 long bone fractures after cast removal
   - 2nd group: 1 case/13 hips: persistent pain → femoral head resection
   - 3rd group: 3 cases/12 hips: extraarticular ossification

CONCLUSIONS

Three groups of patients with hip pain appearance and hip joint dislocation (MP > 80 %) have been analyzed. The minimal follow up time was 2 years.

1st group - open reduction, DVO and Dega pelvis osteotomy

- 33 patients (50 hips)
- Average age 9 y (from 5 y 3 m to 12 y)

2nd group - subtrochanteric valgus osteotomy

- 13 patients (13 hips)
- Average age 14 y 1 m (from 10 y 8 m to 20 y 6 m)

3rd group - hip interposition arthroplasty with shoulder spacer as a palliative treatment option

- 9 patients (12 hips)
- Average age 16 y 7 m (from 12 y 7 m to 21 y 3 m)

1 patient died 6 month after the surgery due to poor pediatric conditions.

All procedures are characterized as an effective treatment option for pain complaint release in spastic joint dislocation in CP children.

Limitations:

- It is hard to compare the final outcome due to different condition of hip joint status before and after surgery.
- Greater improvement of patient condition was observed in the third group, however, it was mostly due to the higher level of pain before surgery and larger femoral head destruction observed on X-rays or during surgery which was indication for this type of palliative treatment.

REFERENCES