



The Effect of Protective Soft Tissue Surgery on Recovery in the Correction of Spinal Deformities in the Patients with Myelomeningocele

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Purpose

- Myelomeningocele (myelodysplasia or spina bifida) is frequently accompanied by spinal deformities (scoliosis, kyphosis).
- The purpose of our study is to evaluate the the effect of protective soft tissue surgery on recovery, in the correction of spinal deformities in the patients with initially operated myelomeningocele.

Methods

- Two male patients with kyphosis, scoliosis and sitting imbalance due to myelomeningocele, were included in the study.
- The mean age of the patients was 9 (6 and 12) years.
- Both patients had undergone myelomeningocele repair in the newborn period.
- A ventriculo-peritoneal shunt system was applied in the first patient when he was 4.5 months old.
- In both patients, the skin on the repaired myelomeningocele sac was irregular and impaired.

Methods

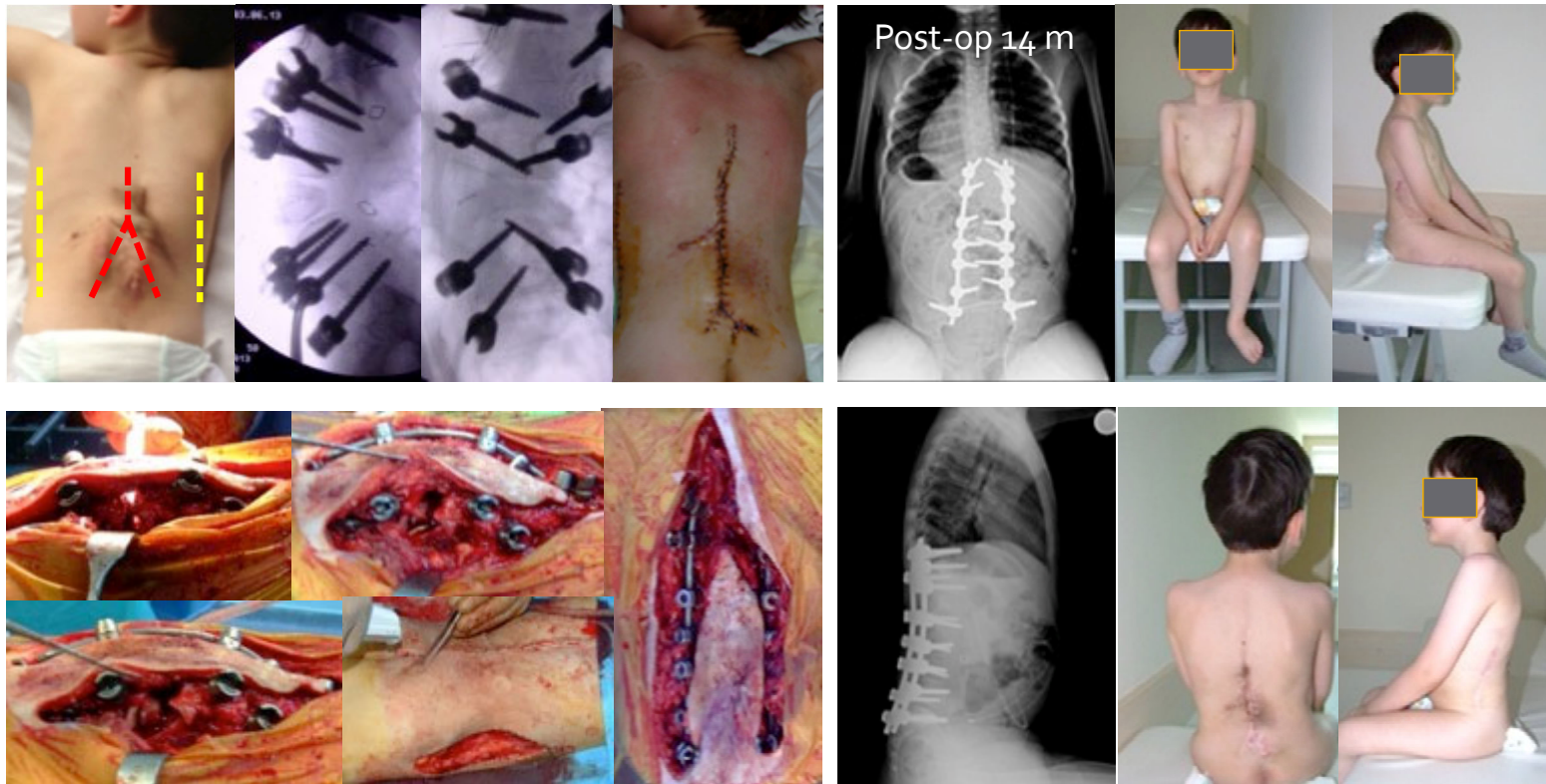
- To avoid insufficient wound closure, soft tissue expanding surgery was performed in the flanks of the patients by a plastic surgeon, 2 weeks before the deformity correction surgery.
- In the patient with severe kyphotic deformity (6 years old) posterior kyphectomy was performed and in the patient with severe scoliotic deformity (12 years old), wide posterior release, posterior instrumentation, correction and fusion was performed.
- In the same session, the expanded skin was advanced over the problematic wound.

Result



- The mean follow up period was 10 (range 6-14) months.
- Preoperative AP Cobb's angle was 50.2° (range 20-88), where as it was measured as 27.5° (range 8-47.3) postoperatively.
- The mean preoperative lateral Cobb's angle was 48.5° (range 21-76) kyphotic in the thoracic region.
- In the lumbar region, in 1 patient it was 77° lordotic and in the other patient it was 83° kyphotic.

Result



Result



- During the last control the mean thoracic kyphosis was 28.5° (range 9-48), the mean lumbar lordosis was 28° (range 9-47).
- The only complication was dural leak due to dural damage in one patient.
- It recovered after primary repair during surgery.
- No wound problem was encountered and sitting balance was obtained in the coronal and the sagittal planes.

Conclusion

- Wound problems are frequently encountered in the patients with myelomeningocele who undergo posterior spinal surgery.
- Thus, it is important to perform protective soft tissue procedures prior to the deformity correcting surgery in these patients in order to avoid postoperative wound problems.