Postoperative fracture complications seen in the patients after sitting imbalance correction

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Abstract

A 4.5 year old congenitally paraplegic female patient who has congenital meningomyelocele, sitting imbalance and a 10x15 cm decubitus ulcer on her lumbar region because of the lumbar kyphosis. After surgery she gained the sitting balance postoperatively. During postoperative rehabilitation that applied to the patient without prediction of low bone quality, patient had femur fracture twice in a short period. In this case we especially aimed to emphasize this fracture complications should be in our mind in these groups of patients.

Keywords: Meningomyelocele, decubitus ulcer, femur fracture, complication

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Introduction

A pouch formation on back and some neurologic disorders are seen is seen by the direct effect of spinal anomaly which is a developmental anomaly of the spinal cord in the patients with meningomyelocele (1, 2).

Recurrent urinary tract infection and septicemia is seen in the patients with meningomyelocele and neurogenic bladder because of frequently usage of permanent catheter. So these patients stay a long time in hospital and use antibiotics frequently (3). Also these patients have decubitus ulcers and lower extremity fractures because of their sitting imbalance (1, 2, 4-8). In this study we aimed to present the treatment of femur fractures with acquired mobilization after spinal surgery of a paraplegic patient with the meningomyelocele, who couldn’t sit without assistance before spinal surgery.

Case

Our patient is 4.5 years old congenitally paraplegic female patient who has the congenital meningomyelocele, sitting imbalance and a 10x15 cm decubitus ulcer on her lumbar region because of the lumbar kyphosis. We applied pouch resection, kyphectomy and posterior instrumentation. After spinal surgery she gained the sitting balance postoperatively. Decubitus ulcers healed completely at the end of the forth week (Figure 1).

Figure 1: The images of decubitus ulcer with the spinal surgery pre-operative and post-operative period.

The patient lives in a nursing home. In postoperative second month while nursing assistances were rehabilitating the patient they realized a swelling and ecchymosis on her right leg. Ten days after that they realized the swelling and ecchymosis, patient was brought to our clinic. After physical and radiologic examination we diagnosed a subtrochanteric femur fracture on her right leg. Afterwards we operated the patient and applied open reduction and internally fixation with locking – plate (Figure 2).
Figure 2: The subtrochanteric femur fracture with images of x-ray pre-operative and post-operative period.

One week after operation, when the patient’s clinical follow-up seemed to heal on, the patient was discharged. On second week control we diagnosed a femur fracture on the distal edge of the plate. The patient was re-operated and applied open reduction and internally fixation with locking – plate (Figure 3). When the patient’s clinical follow-up seemed to heal on, the patient was discharged. On patient serial follow-up, we saw complete fracture healing at 6 month.

Discussion

The patients with meningomyelocele that has paraplegic sitting imbalance, pouch formation by the direct effect of the spinal cord anomaly and chronic decubitus ulcers according to the long term press on the skin can be seen (1, 2). According to the developmental vertebrate anomalies, lumber kyphosis can be seen because of the sagittal vertebrate imbalance. It causes complications like as locally wounds and infections which needs expensive and long term treatment (1, 2).

In these group of patients fractures can be seen because of the low bone density, lower extremity atrophy and some other osseous problems can be seen because of less usage of extremity in a percent of 11 – 30 % (4-8). The fractures don’t seen as frequent as urologic and neurologic complications but it is very comfortless for the patient (4). We applied posterior spinal instrumentation to the patient for her sitting imbalance and related chronic decubitus ulcers and the wounds of patient healed. However this time; during postoperative rehabilitation that applied to the patient without prediction of low bone quality, patient had femur fracture twice in a short period. In this case we especially aimed to emphasize this complication should be in our mind in these group of patients with poor bone quality and sensory deficits (4-8).

Conclusion

In this study we aimed to present femur fracture and re-fracture can be seen in a paraplegic patient with meningomyelocele with acquired mobilization after spinal surgery, who couldn’t sit without assistance before spinal surgery.

Figure 3: The distally femur re-fractures with images of x-ray pre-operative and post-operative period.
References


