

ANALYSIS OF NEUROLOGICAL COMPLICATIONS IN HIP ARTHROPLASTY

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Abstract: Currently, in orthopedics, effective, but technically more complex and time-consuming operations are used, one of which is endoprosthetics for dysplastic coxarthrosis. In connection with the increase in the number of patients who underwent hip arthroplasty, the problem of prevention and treatment of postoperative complications becomes especially urgent. In the structure of specific local complications arising in the early postoperative period after total hip arthroplasty, damage to the peripheral nerves of the lower extremities occupies one of the main places.

Keywords: dysplastic coxarthrosis, hip arthroplasty, postoperative neurological complications.

Introduction

Diseases of the musculoskeletal system (DMS) rank first in frequency among diseases leading to temporary or permanent disability [1]. Deforming arthrosis of the hip joint (HJ) is one of the most common and disabling orthopedic diseases. The steadily progressive nature of the process in this pathology in 60-64% of cases leads to a decrease in working capacity and in 11.5% - to disability of people of working age (25,28,37). Due to the severity of the lesion, every eleventh of those suffering from hip joint diseases ultimately becomes disabled, while in all diseases of the support and movement organs, every hundredth is disabled (2,3).

Improvement in the techniques of arthroplasty and endoprosthetics should lead to a minimal risk of neurological complications in the surgical treatment of hip joint pathology. The priorities for the outcome of the operation have now changed. According to leading experts in this field, it is precisely the improvement of the “quality of life” of patients that is the main goal of endoprosthetics. At the same time, the issues of rehabilitation after such operations, in particular their neurological aspects, await further development (1,3).

Purpose of the study: Conduct a retrospective analysis of neurological complications during hip arthroplasty in patients treated in 2015-2019. in the department of orthopedics of RITO MH RUz.

Material and research methods: At the Research Institute of Traumatology and Orthopedics (RITO) for the period 2015-2019 a retrospective analysis of neurological complications in the postoperative period was carried out in 1762 patients with dysplastic and idiopathic coxarthrosis. These patients underwent endoprosthetics of the hip joint (HJ) in the department of orthopedics of the RITO MH RUz. The area of intervention included the zones of innervation of a number of large nerves: the femoral, sciatic, obturator, and external cutaneous nerve of the thigh. Nerve injuries were of traction, compression (compression by hematoma), and iatrogenic genesis. Basically, these are mononeuropathies of mixed traumatic-ischemic genesis.

Research results: The total number of complications in hip arthroplasty was 142 (8.1%) cases. There were 28 somatic complications (1.6%). Among the somatic complications, pulmonary embolism (PE) was observed in 11 patients (0.6%); hospital pneumonia in 5 patients (0.3%), acute coronary insufficiency against the background of ischemic heart disease - in 3 (0.2%); DIC syndrome - in 3 (0.2%); anaphylactic shock (toxic effect of cement) - in 1 (0.1%); bacterial toxic shock - in 2 (0.1%); contact allergic dermatitis - in 3 (0.2%). The lethal outcome was noted in 11 cases (0.6%) and was observed in the following cases of somatic complications: in hospital pneumonia - 1 case; with pulmonary embolism - 6; with disseminated intravascular coagulation - 2; with anaphylactic shock (toxic effect of cement) - 1; with bacterial toxic shock - 1.

Local complications were noted in 114 cases (6.5%), of which: infection of the surgical site - 37 patients (2.1%); vascular complications - 29 (1.6%); neurological complications - 53 (3.0%); dislocation of the endoprosthesis - 11 (0.6%); hematomas of the area of surgical intervention - 12 (0.7%); intraoperative femoral fracture - 6 (0.3%).

Of the neurological complications in 53 patients, the following pathology was identified. Neuropathy of the femoral nerve (4 cases - 8% of patients with neurological complications) was accompanied by impaired flexion in the TS, extension in the knee, impaired walking up the stairs, atrophy of the anterior muscles of the thigh, the knee reflex faded, the sensitivity along the anterior surface of the thigh was impaired. Neuropathy of the external cutaneous nerve of the thigh (in 7 patients - 13%): motor functions are not impaired, sensitive disorders of hyperesthesia, paresthesia with hyperpathy along the outer surface of the thigh in the area of the postoperative scar. Neuropathy of the obturator nerve (in 11 patients - 21%): impaired adduction of the thigh, impaired sensitivity along the inner surface of the upper third of the thigh. Sciatic nerve neuropathy (in our observations, in 31 patients - 58%) was manifested by impaired flexion in the knee joint, extension in the hip, abduction and rotation of the hip outward, the foot drooped, the calcaneal and plantar reflexes faded, the sensitivity on the lateral, posterior-outer surfaces of the thigh was impaired, shins, feet.

Mild violations with a quick elimination of their cause (for example, evacuation of a hematoma) disappear without a trace. With a sharp loss of nerve function, the

prognosis worsened. In the treatment of pain in the postoperative period, nerve blocks were performed with 0.5% - 1% solution of novocaine 20-25 ml, intramuscular administration of analgesics and antispasmodics in mixtures, NSID, administration of antihistamines, sedatives, tranquilizers in mixtures. All patients underwent complex therapy (physiotherapy, massage, ACS). In the period from one to 4 years after the operation, 19 (35.6%) patients showed restoration of function, the remaining 64.4% had partial restoration of function, but they adapted to everyday and work loads

Conclusion

Thus, according to the study, it was revealed that the total number of complications in hip arthroplasty is 8.1%, of which 1.6% are somatic and 6.5% are local. In total, neurological complications were observed in 53 (3.0%) patients. The sciatic nerve is most often affected - in 21.0% of patients with neurological complications. This was due to the nature of the surgical intervention, which was caused by its overstretching during implantation of the endoprosthesis and the reduction of the artificial head into the cup.

Recommendations: To avoid gross neurological complications, it is necessary to lengthen the limb during the operation by no more than 3-4 cm, and if a neurological deficit is detected, the appointment of targeted treatment.

References

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