BRITISH MEDICAL JOURNAL

British Medical Journal Volume-1, No 2
10.5281/zenodo.5507348

British Medical Journal
Volume 1, No 2., 2021
Internet address: http://ejournals.id/index.php/bmj
E-mail: info@ejournals.id
Published by British Medical Journal
Issued Bimonthly
3 knoll drive. London. N14 5LU United Kingdom
+44 7542 987055
Chief Editor
Dr. Fiona Egea

Requirements for the authors.
The manuscript authors must provide reliable results of the work done, as well as an objective judgment on the significance of the study. The data underlying the work should be presented accurately, without errors. The work should contain enough details and bibliographic references for possible reproduction. False or knowingly erroneous statements are perceived as unethical behavior and unacceptable.
Authors should make sure that the original work is submitted and, if other authors' works or claims are used, provide appropriate bibliographic references or citations. Plagiarism can exist in many forms - from representing someone else's work as copyright to copying or paraphrasing significant parts of another's work without attribution, as well as claiming one's rights to the results of another's research. Plagiarism in all forms constitutes unethical acts and is unacceptable. Responsibility for plagiarism is entirely on the shoulders of the authors.
Significant errors in published works. If the author detects significant errors or inaccuracies in the publication, the author must inform the editor of the journal or the publisher about this and interact with them in order to remove the publication as soon as possible or correct errors. If the editor or publisher has received information from a third party that the publication contains significant errors, the author must withdraw the work or correct the errors as soon as possible.

British Medical Journal Volume-1, No 2
10.5281/zenodo.5507348

IMPROVEMENT OF SURGICAL TREATMENT OF PATIENTS WITH COMBINED DEGENERATIVE-DYSTROPHIC PATHOLOGY OF THE HIP JOINT AND SPINE WITH PREVALENCE OF MANIFESTATIONS OF COXARTHROSIS

Mirzamurodov Habibjon Halimovich, Nurulloev Sukhrob Ozodovich
Bukhara state medical institute, Bukhara, Uzbekistan

Abstract. This article is devoted to the analysis of the treatment results of 60 patients with coxo-vertebral syndrome, which developed against the background of grade III deforming arthrosis of the hip joint, who were treated at the Department of Traumatology and Orthopedics of Bukhara Multidisciplinary Medical Center and its bases in the period from 2017 to 2020. These patients underwent primary total hip arthroplasty. When studying the outcomes of surgical treatment, special attention was paid to patient satisfaction with the achieved result, both from the point of view of the disappearance of pain in the hip joint and restoration of its functions and from the point of view of relief of pain in the lumbar region, restoration of posture and assessment of the achieved quality of life. A separate particular task of this section was to analyze the prerequisites for achieving certain outcomes of hip arthroplasty. Its results, along with the analysis of the treatment outcomes of patients with coxo-vertebral syndrome (CVS) with the prevalence of degenerative-dystrophic disease of the spine (DDDS), formed the basis for the algorithm for choosing rational surgical tactics for treating patients of this profile.

Keywords: treatment, coxo-vertebral syndrome, coxarthrosis, endoprosthetics.

Introduction

One of the most difficult, socially and economically significant problems of modern orthopedics is the treatment and rehabilitation of patients suffering from deforming arthrosis of the hip joints in combination with pathology of the spine. The presence of pathological changes in the patient both in the hip joint and in the lumbosacral spine, accompanied by pain syndrome and their mutual burden, has received the name coxo-vertebral (hip-spine) syndrome in foreign literature.

The most common causes of coxo-vertebral syndrome (VCS) are, first of all, aseptic necrosis of the femoral head, as well as dysplasia and the consequences of traumatic injuries of the hip joint, accompanied by persistent combined contractures and limb shortening.

The place and role of these studies in modern clinical practice has not been definitively determined. It is necessary to substantiate and regulate the nature and volume of additional examination of patients in the complex diagnosis of coxo-vertebral syndrome (CBC). It is advisable to identify the main patterns of static and functional changes in this category of patients. A scientifically grounded system of complex diagnostics of combined pathology of the hip joint and lumbosacral spine, as well as a complex system for choosing rational tactics of surgical treatment in patients of this profile, requires the development.

Material and methods

10.5281/zenodo.5507348

In order to determine the most effective tactics of surgical treatment of patients with coxo-vetebral syndrome, studies were carried out to study the results of surgical treatment in these patients. Control clinical and X-ray examination was performed in 60 patients (100%). Communication with 21 patients was lost. All these patients underwent total hip arthroplasty, while three of them also underwent surgery for DDSD (2 - before hip arthroplasty, 1 - after). Subsequently, in terms of 8 to 11 months (average 9 months), the anatomical and functional results of treatment of patients in the main group were analyzed using the developed algorithms for diagnostics, planning and improved surgical tactics.

Results

Complaints of pain syndrome along the anterior surface of the hip joint (in the groin area), which occurred in all patients of the considered group during the initial examination, were presented only by 7 out of 60 patients (11.7%). At the same time, two patients characterized the pain syndrome as moderate, and five - as insignificant. All seven examined patients noted a significant decrease in comparison with the baseline. Complaints about limitation of movements in the hip joint, which occurred in 100% of patients in the retrospective group before the operation, were not presented to any patient during the follow-up examination.

In 27 clinical cases (45.0%) complaints about the need to use a cane while walking were registered, while all the patients under consideration noted the absence of restrictions on the time and distance of movement. The same patients noted lameness in the operated leg (27 clinical observations or 45.0%). Another 22 patients (36.7%) drew attention to the subjective sensation of unevenness of the lower extremities, manifested by the sensation of lengthening or shortening of the operated leg.

Pain in the lumbar region occurred in 42 of the retrospective patients examined in the postoperative period (70.0%). In 17 clinical cases (28.3%), patients characterized pain in the lumbar region as moderate, with no dynamics in comparison with the preoperative state, and in 25 (41.7%) - as insignificant, noting a decrease in the intensity of back pain in comparison with the severity of this symptom before hip arthroplasty. In 40 clinical cases (66.7%), patients were worried about the persisting limitation of movements in the back.

The results of the control objective clinical examination confirmed the complete or close recovery of the amplitude of active and passive movements in the hip joint in all 60 patients.

At the control clinical examination, there were no symptoms of "fabere", Thomas, Trendelenburg, as well as Trendelenburg gait, revealed, respectively, in 65.4%, 37.0%, 53.1% and 33.3% of patients in the considered sample before hip arthroplasty. All persons arriving for the check-up were able to climb stairs and were able to use public transport. In addition, it should be noted that the number of patients who complained of pain during paravertebral palpation and palpation of the spinous processes during the follow-up examination was significantly lower after hip arthroplasty (55.0% and 26.7%, respectively, $p < 0.001$).

10.5281/zenodo.5507348

Comparative results of the primary and control X-ray examination of the spine-pelvic complex in patients of the control sample are presented in table 1.

Table 1

Results of X-ray examination of the spine-pelvic complex of profile patients of the comparison group (°) Me [Q25; Q75%] (n is the number of patients who underwent both primary and control studies)

parameters		Before hip arthroplasty (n = 29)	After hip arthroplasty (n = 29)	Significance of differences (Wilcoxon test)
Pelvic	Hip angle (PI)	49,5 (44,0; 63,0)	51,5 [50,5; 54,0]	p>0,05
	Sacrum Slope (SS)	41,0 (35,0; 47,0)	42,0 [40,0; 46,0]	p>0,05
	Pelvic deviation (PT)	7,0 (2,0; 12,0)	11,0 [7,0; 15,0]	p=0,019
	Pelvic tilt (PL)	6,0 (3,0; 8,0)	14,0 [12,0; 17,0]	p<0,001
	Pelvic misalignment (PO)	2,0 [1,0; 4,0]	1,0 [0,0; 1,0]	p<0,001
	Sacrum misalignment (SO)	3,0 [1,0; 5,0]	1,0 [0,0; 2,0]	p<0,001
Vertebral	Lumbar lordosis (GLL)	53,0 [43,0; 60,0]	50,0 [45,0; 54,0]	p>0,05
	Lower arch of lordosis (LA)	41,0 [35,0; 47,0]	42,0 [40,0; 46,0]	p>0,05
	Upper arch of lordosis (UA)	12,0 [10,0; 17,0]	12,0 [10,0; 17,0]	p>0,05
	Scoliotic deformity (SA)	6,0 [1,0; 12,0]	2,0 [0,0; 8,0]	p<0,001

Analysis of the information presented in the table made it possible to reveal statistically significant differences in a number of radiological parameters. The data obtained indicated that, as a result of total hip arthroplasty, in most clinical cases, it was possible to restore the frontal spine-pelvic balance.

Evaluation of the significance of differences in the main sagittal spine-pelvic parameters measured before the operation and during the follow-up examination revealed statistically significant differences in the values of the pelvic inclination (PL), its deviation (PT), as well as a tendency towards a decrease in compensatory lumbar lordosis (GLL) due to reducing the slope of the sacrum (SS) and the associated lower arch of the lumbar lordosis (LA).

The data obtained also indicate changes in the sagittal spinal-pelvic relationships resulting from surgery on the hip joint, leading in patients with severe flexion-adduction contracture of the hip joint to a decrease in the sagittal profile of the lumbosacral spine and the disappearance of excessive anteversion of the pelvis. A detailed analysis of these changes, carried out in each patient subjected to a control examination, made it possible to confirm their dependence on the severity of

10.5281/zenodo.5507348
degenerative-dystrophic manifestations in the lumbosacral spinal motion segments and the mobility of the spine in question.

In order to objectify the achieved functional outcomes of surgical treatment of patients with coxo-vertebral syndrome, as well as to analyze the data of patients' subjective assessment of the quality of life and function of the hip joint, two specialized validated questionnaires were used: W. Harris and Oswestry (Oswestry Disability Index - Oswestry's quality of life questionnaire).

The results of a comparative assessment of the function of the hip joint of patients in the comparison group invited to the clinic for a control examination were analyzed according to the following sections of the W. Harris questionnaire: pain, function, absence of deformity, range of motion. The data obtained, in general, indicated a significant improvement in performance after hip arthroplasty. So, with the initial mean value equal to 41.1 ± 14.5 points, the results of the control examination of the profile patients of the retrospective sample averaged 75.7 ± 16.8 points ($p < 0.005$).

The results of the Oswestry questionnaire also showed a significant improvement in the quality of life of the patients in question. The baseline level according to the preoperative questionnaire was 33.4 ± 19.1% on average, while the average control examination results were 12.9 ± 16.8% ($p < 0.005$).

An analysis of the additional questioning of patients in the control sample showed that 44 patients (73.3%) were generally satisfied with the results of surgical treatment of coxarthrosis; 27 people (45.0%) were forced to use a cane; 22 patients (36.7%) noted a subjective sensation of lengthening or shortening of the operated leg; 42 patients (70.0%) noted the persistence of pain in the lumbar region, while 45 patients (41.7%) described it as insignificant, and 17 (28.3%) - as moderate or severe; 28 patients (46.7%) noted a subjective feeling of a change in posture, and 27 patients (45.0%) believed that they limped slightly on the operated limb.

Thus, hip arthroplasty in profile patients of the considered sample, in general, led to a significant reduction in pain, restoration of the function of the operated joint, and an improvement in the quality of life of patients with coxo-vertebral syndrome.

In order to detail the results obtained and determine the reasons for their achievement, the outcomes of surgical treatment of patients of the profile under consideration were divided by us into “good”, “satisfactory” and “unsatisfactory”. The characteristics of the achieved anatomical and functional results were based on a set of data, the main of which was considered the patient's subjective assessment of the result of surgical treatment, as well as data from the use of specialized score questionnaires by W. Harris and Oswestry.

The outcomes of surgical treatment of patients who were completely satisfied with the results of hip arthroplasty were considered good. This group of patients included persons who noted the disappearance of pain and stiffness in the operated hip joint, lameness, and pain in the lumbar region. In addition, these patients noted a significant subjective improvement in posture in the form of the disappearance of sagging in the lower back and the skew of the pelvis. The results demonstrated by these patients according to the use of W. Harris and Oswestry questionnaires were

10.5281/zenodo.5507348
82.3 ± 10.6 points and 5.8 ± 4.67%, respectively. The total number of patients whose results of surgical treatment were assessed as good was 16 (26.7%).

The outcomes of surgical treatment of patients who were partially satisfied with the results of hip arthroplasty were considered satisfactory. This group of patients included persons who noted the disappearance of pain and stiffness in the operated hip joint, as well as lameness on the operated leg. At the same time, all patients in this sample noted the persistence or only a slight decrease in pain in the lumbar region. The results obtained when using W. Harris and Oswestry questionnaires in these patients were 71.4 ± 13.8 points and 21.4 ± 20.6%, respectively. The total number of patients whose results of surgical treatment were assessed as satisfactory was 28 (46.6%).

The outcomes of surgical treatment in patients who were completely dissatisfied with the results of hip arthroplasty were considered unsatisfactory. This group of patients included persons with persistent pain in the area of the operated joint, with its residual stiffness and lameness. In addition, this sample included patients who reported a significant increase in low back pain after hip arthroplasty. As a result of questioning these patients with specialized questionnaires, the following data were obtained: W. Harris - 68.0 ± 19.0 and Oswestry 22.6 ± 16.7. The total number of patients whose results of surgical treatment were assessed as unsatisfactory was 16 (26.7%).

Conclusion

The analysis of the outcomes of surgical treatment of patients with coxvertebral syndrome with prevalence of manifestations of deforming arthrosis of the hip joint (grade III) from the control group, as well as the analysis of the reasons that led to the achievement of certain results formed the basis for a comprehensive algorithm for choosing rational tactics for surgical treatment of patients with combined degenerative-dystrophic pathology of the hip joint and spine.

References

1. Ergashov B.B. Treatment and prevention of arrhythmias associated with anticancer therapy // Asian journal of Pharmaceutical and biological research Volume 10 Issue 2 MAY-AUG 2021. P. 47-54.
2. Ergashov B.B. A causal relationship of anticancer drugs with specific arrhythmias // Asian journal of Pharmaceutical and biological research Volume 10 Issue 2 MAY-AUG 2021. P. 55-55.
3. Makhmudova L.I., Akhmedova N.Sh., Ergashov B.B. Clinical manifestation of irritable bowel syndrome Art of Medicine Volume-1 International Medical Scientific Journal Issue-2 P. 24-33.
4. Abdullaeva U.K. Predicting the risk of atrophic transformation in chronic gastritis using serum pepsinogen // World journal of pharmaceutical research, Faculty of Pharmacy Medical University, Bulgaria, Vol. 8, Iss. 13, 2019, P. 219-228.
5. Abdullaeva U.K., Sobirova G.N., Karimov M.M., Aslonova I.J. The prevalence and possibilities of prevention of noncardial gastric cancer in the Bukhara region // American journal of medicine and medical sciences, 2020, 10(9), P. 679-681.
6. Sobirova G.N., Abdullaeva U.K., Nosirova M.S., Aslonova I.J. Evaluation of the gastrointestinal mucosa by the OLGA system in chronic atrophic gastritis // Journal of critical reviews, Kuala Lumpur, Malaysia, Vol. 7, Iss. 2, 2020, P. 409-413.
7. Karimov M.M., Sobirova G.N., Abdullaeva U.K., Aslonova I.Zh., Tulyaganova F.M. Possibilities of serological diagnosis of atrophic processes of the gastric mucosa // European Journal of Molecular & Clinical Medicine Vol. 7, Iss. 11, 2020, P. 2955-2960.
8. Karimov M.M., Sobirova G.N., Abdullaeva U.K. Chronic gastritis and carcinogenesis issues // Herald of Pancreatic Club, 45 (4). P. 65-70. (in Russian)
9. Abdullaeva U.K. Predicting the risk of atrophic transformation in chronic gastritis using serum pepsinogen // World journal of pharmaceutical research, Faculty of Pharmacy Medical University, Bulgaria, 8 (13) P. 219-228.
10. Sobirova G.N., Abdullaeva U.K. Immunopatogenesis of chronic gastritis and its role in carcinogenesis // Journal of Biomedicine and Practice, 1 (4). P. 40-44.
11. Karimov M.M., Sobirova G.N., Abdullaeva U.K., Aslonova I.Zh., Tulyaganova F.M. Possibilities of Serological Diagnosis of Atrophic Processes of the Gastric Mucosa // Annals of the Romanian Society for Cell Biology, , Vol. 25, Issue 1, 2021, Pages. 6168 – 6174.
12. Abdullaeva U.K., Shadjanova N.S. Using the OLGA system in chronic atrophic gastritis // New day in medicine, 2020, №2, P. 9-12.
13. Nurulloyev S.O., Mirzamuradov H.H. Morphological Changes In Bone Tissue In Chronic Osteomyelitis On The Background Of Application Of Plate Concentrate // The American Journal of Medical Sciences and Pharmaceutical Research Volume 3 Issue 04, 2021. P. 160-164.
14. Mirzamurodov H.H. New approaches to treatment of patients with coxovertebral syndrome // Asian journal of Pharmaceutical and biological research. Volume 10 Issue 2 MAY-AUG 2021. P. 9-19

15. Mirzamurodov Kh.Kh., Akhmedov Sh.Sh., Nuruloev S.O., Ziyadullaev A.Kh., Nematov D.A. Optimization of total hip arthroplasty in dysplastic coxarthrosis // New day in medicine. 4 (32) 2020 P. 667-672. (in Russian)
16. Nurullaev S.O., Akhmedov Sh.Sh., Akramov V.R., KhamraevA.Sh., Khamraev B.U., Mirzamurodov Kh.Kh Our experience in the treatment of grade I-II gonarthrosis with hyaluronic acid preparations // ACADEMICIA: An International Multidisciplinary Research Journal. Vol. 10, Issue 12, December 2020. P. 1771-1775.
17. Mirzamurodov H. Kh., Khodzhanov I. Yu., Nurulloev S.O. Complex conservative therapy for hip-spine syndrome // International Scientific and Educational electronic journal "Education and science in the xxi century" 2021. Issue No. 12 (volume 2). P. 1438-1439. (in Russian).
18. Nurulloev S.O., Mirzamuradov Kh.Kh. Our experience in the treatment of degree i-ii gonarthrosis with drugs hyalouranic acid // Innovation in the modern education system. 2021. Part 5, Issue 1. P. 546-548. (in Russian).