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ABSTRACT BOOK



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Oral Presentation Session

Surgical Approach to Carotid Disease: A Master Class Setting

Date: 04.11.2023 Time: 11:45 - 12:45 Hall: 7

ID: 112

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Cerebral Oxymetry In Determining The Tactics Of Surgical Treatment Of Multiple Atherosclerotic Lesions Of The Carotid Arteries

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Aim of the study. Investigate the role and place of cerebral oximetry in the choice of treatment for patients with multiple atherosclerotic lesions of the carotid arteries.

Material and methods. The results of surgical treatment of 144 patients with multiple atherosclerotic lesions of the carotid arteries are presented. The effectiveness of cerebral oximetry performed in the preoperative period in predicting the tolerance of the brain to ischemia during surgery was evaluated. The features of cerebral hemodynamics in patients with multiple atherosclerotic lesions of the carotid arteries were studied.

Results. Depending on the degree of damage to the ipsilateral and contralateral carotid arteries, the patients were conditionally divided into 5 groups. When performing cerebral oximetry with compression tests, it was found that in groups I and II, rSO₂ decreased to the minimum values within 10-45 seconds, and then, before the termination of compression tests, rSO₂ returned to the initial values or close to them (within the next 30-60 seconds). In other groups, rSO₂ decreased significantly more, and recovery was much slower than in groups I and II; in patients with an isolated middle cerebral artery, rSO₂ recovery did not occur at all until the compression tests were stopped. In the 1-day of postoperative period, cerebral oximetry showed no changes in rSO₂ both in the operated side and in the intact side. At the same time, there is a 46% decrease in the magnitude of interhemispheric asymmetry compared with preoperative values. By day 3, there was an increase in rSO₂ by 11.5% on the side of the operation compared with preoperative values (p=0.03).

Conclusion. Our studies confirm the effectiveness of cerebral oximetry in combination with exercise tests in assessing the brain's tolerance to ischemia and predicting the magnitude of the decrease in regional blood oxygenation of the cortical parts of the brain during carotid reconstruction.

| ID: 96 |
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| Topic: |
| Cardiovascular Surgery > Surgical treatment of AF |

Presentation Type:

Oral Presentation

Analysis Of Complications Related To Heart Ischemia In The Postoperative Period In Patients Who
Have Performed Carotid Edarterectomy

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The purpose of the study: to study the incidence of cardiological complications after carotid endarterectomy (CEAE) in patients with asymptomatic ischemic heart disease (IHD).

Materials and methods. In 2018-2020, the medical history of 600 patients with chronic cerebrovascular insufficiency (CCI) admitted to the Department of Vascular Surgery of Multidisciplinary Clinic of Tashkent Medical Academy and Republican Specialized Center of Surgical Angioneurology was analyzed. Patients who did not undergo coronary angiography before surgery, but underwent CEAE, were included in the study. The average age of the patients was 64.5±2.6 years. Among the patients, 344 (57.3%) were men, 256 (42.7%) were women. Complaints and anamnesis were collected in all patients, accepted general clinical examination methods were performed. Patients were followed up from 6 to 24 months after surgery.

Results. Arterial hypertension (AG) was detected in 515 (85.8%) patients. Average systolic blood pressure (SBP) is 136.6±22.3 mm cm. diastolic blood pressure (DBP) is 85.2 ± 16.4 mm Hg. The average number of beats per minute of the heart is 78.3±14.2 times. Among 600 patients studied in the early postoperative period, 15 (2.5%) patients had myocardial infarction (MI), 45 (7.5%) patients had transient myocardial ischemia with significant changes in the amount of cardiospecific biomarkers in their plasma. All infarcts occurred within the first 5 postoperative days, with 11 patients having non-Q wave MI and 4 patients having Q wave MI. In the majority of patients with transient myocardial ischemia (38 out of 45 patients), signs of ischemia were manifested on the electrocardiogram (ECG) in the form of horizontal or oblique depression of the ST segment, and only in 7 patients - in the elevation of the ST segment. In the long-term follow-up after CAE, 35 patients had MI and 46 (7.7%) patients underwent percutaneous coronary intervention (PCI) or coronary artery bypass grafting (ACB).

Conclusions.

- 1. Carotid atherosclerosis requires an individual and multidisciplinary approach to consider patients with probable coronary artery disease and to choose their treatment tactics.
- Cardiological complications observed in the early periods after CEAE practice have the following characteristics: myocardial infarction is often painless, without Q wave and does not lead to the

development of severe heart failure, most episodes of myocardial ischemia are manifested in the form of depression of the ST segment and painless ischemia on the ECG.

3. Systematic coronary angiography examination before CEAE in patients with asymptomatic IHD and performing PCI or ACS in patients with coronary vessel changes can, in turn, significantly reduce the incidence of MI that can be observed in the early and late periods after CAE and increase the life expectancy of patients.

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Our Experience Of Surgical Treatment In Combined Stenosis Of Carotid Bifurcations And Supra-Aortic Arteries

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Objectives: The purpose of our study is to describe the technique, while evaluating the safety and efficacy of hybrid carotid revascularization in the treatment of combined occlusive lesions of the carotid bifurcation and supra-aortic arteries (common carotid artery (CCA) or the brachiocephalic trunk (BCT)).

Materials and Methods: This is a single-center prospective cohort study, including all patients undergoing hybrid carotid revascularization from 2018 to 2023. A total of 21 patients were included in our cohort. There were 16 men and 5 women, with an average age of 56.8 ± 7.1 years. Atherosclerosis was the presumed etiology of arterial stenosis in all of the cases. All surgical interventions were performed with local anesthesia by means of standard operative access to the carotid artery bifurcation. A 6F sheath was placed in the femoral artery and a pigtail catheter was positioned in the aortic arch so that positioning can be confirmed before stent placement. The antegrade stenting of the CCA or BCT was then performed, depending on the clinical situation. After the correction of the proximal stenosis of the CCA or BCT and the performance of the angiography for confirmation of position, the carotid endarterectomy (CEA) was performed. The mean follow-up was 19.8 months (range, 6-36).

Result: In 15 cases, hemodynamically significant stenosis of the left internal carotid artery (ICA) of more than 70% was found in combination with stenosis of more than 60% of the left CCA. These patients underwent stenting of the left CCA stenosis in combination with CEA. 2 patients underwent CEA using the eversion technique and 13 patients using patch angioplasty. In 6 cases, patients had right ICA stenosis of more than 70% combined with critical stenosis of the BCT of more than 70%. These patients underwent CEA with patch angioplasty of the right ICA in combination with stenting of the critical BCT stenosis. During the early postoperative period and follow-up to 36 months, a stroke was not registered. None of the patients experienced procedural or immediate postprocedure bleeding, access site complications, or myocardial infarction. During the follow-up, 2 patients died. The cause of death in the first case was coronary heart disease (6 months) and in the second case was related to malignancy (12 months).

Conclusion: Hybrid interventions (CEA and stenting of the CCA or BCT) allow practitioners to combine the advantages of each method in providing a therapeutic intervention for patients with multilevel lesions of the carotid bifurcations and supra-aortic arteries. This single center study supports the safety and durable efficacy of these procedures in a small cohort of patients.

ID: 97

Topic:

Cardiovascular Surgery > Diagnosis and treatment of valvular heart disease

Presentation Type:

Oral Presentation

Peculiarities Of Surgical Tactics In Takayasu Arteritis Of Extracranial Vessels

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Purpose of the study. To analyze the surgical treatment of NAA patients who underwent surgery for lesions of the brachiocephalic arteries.

Material and methods. A retrospective analysis of the surgical treatment of 66 patients with NAA who were hospitalized at the Republican Center for Surgical Angioneurology and at the Department of Vascular Surgery of the Multidisciplinary Clinic of the Tashkent Medical Academy in the period 2019-2022 was carried out.

The patients were divided according to the classification of chronic cerebrovascular insufficiency by A.V. Pokrovsky (1979): I degree - 4 (6%), II degree - 20 (30.3%), III degree - 24 (36.4%), IV degree - 18 (27.3%) patients.

Group 1 - open interventions on extracranial vessels - 28 patients: bifurcation aorto-carotid bypass grafting - 8 patients, common carotid artery replacement - 12 patients, subclavian carotid bypass grafting - 8 patients.

Group 2 - endovascular interventions - 20 patients: angioplasty of the vertebral artery (VA) - 6 cases, angioplasty and stenting of the VA - 2 patients, angioplasty of the common carotid artery (CCA) - 4, angioplasty of the subclavian artery (SCA) and brachiocephalic trunk - 2 cases, angioplasty and stenting of the CCA - 6 patients.

Group 3 - hybrid interventions - 18 patients: CCA stenting + endarterectomy (EAE) from the CCA and internal carotid artery (ICA) with allo patch - 8 cases, CCA prosthetics + RCA angioplasty - 4 patients, CCA prosthetics + angioplasty and RCA stenting - 6.

Results. In the early postoperative period, operated patients in group 1 had hyperperfusion syndrome - 1 case, ICA thrombosis followed by ischemic stroke - 1 case. In group 3, 1 patient had bleeding from the site of the allo patch. There were no lethal outcomes. During the follow-up period from 6 months to 5 years, ischemic stroke was observed in 2 patients from group 2, in 1 patient with a subsequent death, in addition, restenosis developed in 1 patient on the side of the intervention, the observation of the rest of the patients continues.

Conclusion. Thus, our experience of surgical treatment of patients with NAA with multivessel lesions showed that the choice of tactics should be determined individually, while the main principle is the staged correction of circulatory disorders.

Topic:

Cardiology > Coronary stents and advances in stent technology

Presentation Type:

Poster

To Study Of QT Interval In Patients With Coronary Artery Disease After The Stenting Operation

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Importance of the subject. Unexpected sudden cardiac death is one of the most distressing and baffling issues in the contemporary society. A lot of risk factors for sudden cardiac death had been proposed in the past, many have been discarded for their lack of specificity. Persistent prolongation of the QT interval constitutes a further important risk indicator in people with ischemic heart disease. Based on clinical, epidemiological and experimental data, cardiac ischemia is one of the major triggering factors of malignant ventricular arrhythmia.

Terms such as "controversy" and "debate" are frequently used when describing QTc prolongation as a risk factor for death. The QT interval is the measure of time between the onset of ventricular depolarization and completion of ventricular repolarization. Prolonged QT interval is thus considered an attractive noninvasive risk factor for SCD since a delay in ventricular repolarization can provoke arrhythmias, such as ventricular fibrillation and torsade de pointes. Unfortunately, available data have yielded conflicting results, thus fueling the ongoing debate on the clinical significance of abnormal QTc prolongation.

The purpose of the study: In order to assess the formation of risks of life endangering arrythmias, the changes in the QT interval are identified via non-invasive ECG test in cardiology. We have investigated the dynamic changes in the QT interval in patients with IHD after the stenting operation.

Materials and methods: The total of 40 patients (15 female and 25 male) aged 45-65, IHD, stable angina, FC III, patients without mycardial infarction and diabetus mellitus were chosen for the sudy. The study was carried out in the second clinic of TMA, in the department of surgery and angiography in 2015-2016. SCHILLER ECG, veloergometry and the SIEMENS angiography apparatus were deployed in the research. The stents Resolute, Biomatrix, Orsiro and Xience were used in the study. QT interval was measured three days before and after the intervention and the formula of Bazett was used in this measurement.

Results: All the patients in the sample were divided into three groups based on the results of coronaroangiography. 1st group consisted of 15 patients and 75,5±2,24% stenosis was identified in the descending coronary artery, 2nd group consisted of 15 patients and 75,0±2,4% stenosis was identified in the circumflex coronary artery, 3rd group consisted of 5 patients and 76,0±1,6% and 75,2±2,4% stenosis was identified both in right and descending coronary artery, 4th group consisted of 5 patients and 78,5±1,6%, 76,2±2,6% and 68,5%±1,6% stenosis was identified right, descending and circumflex

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coronary arteries. Drug-eluting stent was inserted in all patients. Recanalization rate constituted 3 balls according to TIMI. QTc accounted for 476,1±3,71 ms before the operation and 445,1±3,3 ms after the operation in 1st group patients. This indicator was 469,1±5,6 ms before the stenting operation and 432,7±5,3 ms after it in 2nd group patients. QTc was 466,2±1,3 ms before the recanalization and 462,6±3,97 ms after the operation in 3rd group patients and in the last group of patients less changes in QTc (before 480,2±1,3 ms and 476,6±3,97 ms after the operation).

Conclusion: The prolongation of the QT intervals demonstrates the process of ventricular repolarization is nonhomogenous and it illustrates the progression risk of fatal, life threatening arrythmias based on re-entry mechanism. It is evident that the noticeable reduction in QTc is being observed after recanalization in a single-vessel disease of over 70% whereas there haven't been any noticeable changes in QTc in a double, triple -vessel diseases. The decreases of QT interval may have been caused by improvements in myocardial perfusion and may prove beneficial in reducing the probability of arrhythmias occurring.

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Keyword: CAD (Coronary artery disease);, UCD (unexpected cardiac death), MI - myocardial infarction, DM - Diabetes mellitus, LTA - life threatening arrhythmia

| ID: 62 |
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| Topic: |
| Cardiology > Coronary stents and advances in stent technology |
| Presentation Type: |
| Poster |

An Assessment Of Dynamic Changes Of Qt Interval In Patients With Single Vessel Coronary Artery Disease After Stenting Operation

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INTRODUCTION: In order to assess the formation of risks of life-threatening arrythmias in the type of ventricular tachycardia and fibrillation, the changes in the QT interval is identified via non-invasive ECG test in cardiology. We have investigated the dynamic changes in the QT interval in patients suffering from IHD, but those who have not experienced mycardial infarction after the stenting operation in this paper.

MATERIALS AND METHODS: The total of 40 patients (15 female and 25 male) aged 45-65, IHD, stable angina, FC III, patients without mycardial infarction were chosen for the sudy. The study was carried out in the second clinic of TMA, in the department of surgery and angiography in 2015-2016. SCHILLER ECG, treadmill and the SIEMENS angiography equipments were deployed in the research. QT interval was measured three days before and after the intervention and the formula of Bazett was used in this measurement.

RESULTS: All the patients in the sample were divided into three groups based on the results of coronaroangiography. 1st group consisted of 20 patients and 75,5±2,24% stenosis was identified in the descending coronary artery, 2nd group consisted of 15 patients and 75,0±2,4% stenosis was identified in the circumflex coronary artery, 3rd group consisted of 5 patients and 76,0±1,6% stenosis was identified in right coronary artery. QTc accounted for 476,1±3,71 ms before the operation and 445,1±3,3 ms after the operation in 1st group patients, (p>0,01). This indicator was 469,1±5,6 ms before the stenting operation and 432,7±5,3 ms after it in 2nd group patients, (p>0,01). QTc was 466,2±1,3 ms before the recanalization and 432,6±3,97 ms after the operation in 3rd group patients, (p>0,01). It is evident that the noticeable reduction in QTc is being observed after recanalization in single-vessel disease of over 70%.

CONCLUSION: Life-endangering arrythmias have a principal role to play in the formation of a sudden cardiac death among patients with IHD; The prolongation of the QT intervals demonstrates the fact that the process of ventricular repolarization is nonhomogenous and it illustrates the progression risk of fatal, life threatening arrythmias based on re-entry mechanism. Positive changes in QT interval after the stenting operation reveal improvements in the electromechanical function of ventricles and the reduction in the risk of sudden arrythmic death.

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Keyword: CAD (Coronary artery disease);, UCD (unexpected cardiac death), MI - myocardial infarction, DM - Diabetes mellitus, LTA - life threatening arrhythmia