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The Asian Society for Cardiovascular and Thoracic Surgery

27TH ASCVTS & 65TH IACTS CON
21st - 24th FEBRUARY 2019 CHENNAI

IACTS
Indian Association of Cardiovascular- Thoracic Surgeons

AMERICAN ASSOCIATION FOR THORACIC SURGERY

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27th ASCVTS & 65th IACTSCON

27th Annual Conference of the Asian Society for Cardiovascular and Thoracic Surgery

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SOUVENIR

syndrome, Di George's syndrome. Associated Subaortic membrane with Pectus carinatum deformity has not been documented in the literature.

Surgical correction of pectus carinatum is usually performed for cosmetic reasons and sometimes for physiological reasons. Cardiopulmonary complications resulting from mechanical compression by the deformed chest wall may be an indication for surgical correction, especially in patients with underlying cardiac disease. Cardiac compression can contribute to postoperative hemodynamic instability if the pectus deformity is left uncorrected.

We report the successful management of a simultaneous correction of Pectus carinatum Chondro-gladiolar symmetrial type, using Sternal AO plate at lower sternal osteotomy and KLS Martin plates at mid and upper sternal osteotomies and the resection of underlying Sub-aortic membrane performed through a minimally invasive approach (right anterior mini-thoracotomy and central cannulation).

Comparative study of short-term cardiovascular autonomic control in cardiac surgery patients who underwent coronary artery bypass grafting or correction of valvular heart disease

Dr.Olga Bockeria | Anton Kiselev | Artak Ispiryan | Maria Sokolskaya

Dr.Vladimir Shvartz

Abstract:

Introduction: Our aim was to perform a comparative study of short-term cardiovascular autonomic control in cardiac surgery patients who underwent coronary artery bypass grafting (CABG) or surgical correction of valvular heart disease (SCVHD).

Methods: The synchronous 15 minutes records of heart rate variability (HRV) and finger's photoplethysmographic waveform variability (PPGV) were performed in 42 cardiac surgery patients (12 women) aged 61.8 ± 8.6 years (mean ± standard deviation), who underwent CABG, and 36 patients (16 women) aged 54.2 ± 14.9 years, who underwent SCVHD, before surgery and in 5-7 days after surgery. Conventional time and frequency domain measures of HRV and index S of synchronization between the slow oscillations in PPGV and HRV were analyzed. We also calculated personal dynamics of these indices after surgery.

Results: We found no differences (P > 0.05) in all studied autonomic indices (preoperative and post-surgery) between studied patients' groups, except for the preoperative heart rate, which was higher in patients who underwent SCVHD (P = 0.013). We have shown a pronounced preoperative and post-surgery variability (magnitude of inter-quartile ranges) of all autonomic indices in studied patients. In the cluster analysis based on cardiovascular autonomic indices (preoperative and post-surgery), we divided all patients into two clusters (38 and 40 subjects) which did not differ in all clinical characteristics (except for the preoperative hematocrit, P = 0.038), index S, and all post-surgery HRV indices. First cluster (38 patients) had higher preoperative values of the HR, TP, HF, and HF%, and lower preoperative values of the LF% and LF/HF.

Conclusion: The variability of cardiovascular autonomic indices in on-pump cardiac surgery patients (two characteristic clusters were identified based on preoperative indices) was not associated with their clinical characteristics and features of surgical procedure (including cardioplegia).

Mutual Dynamics of Synchronization of Low-frequency Oscillations in Circulation Vegetative Regulation and Indicators of Variability of the Heart Rhythm in Patients after Operations with Artificial Circulation in the Early Postoperative Period

Dr.Anton Kiselev | Artak Ispiryan | Maria Sokolskaya | Olga Bockeria

Dr.Vladimir Shvartz

Abstract:

Objective: To investigate peculiarity of co-operative dynamics of autonomic circulatory control indices, including synchronization of low frequency oscillations in heart rate variability (HRV) and photoplethysmogram (PPG), in patients after surgery with cardiopulmonary bypass (CPB) in the early postoperative period. Methods. 62 patients, who had survived surgery with CPB, were included in the study (40 men, 22 women, aged 57,9±7,6 years). The synchronous registration of cardiointervalogram and PPG during 15 minutes was performed in all patients before surgery and 5-7 days after surgery in the morning. We calculated the total percentage of phase synchronization of low frequency rhythms in HRV and PPG (index S), heart rate (HR) and some assessments of HRV (SDNN, TP, HF% и LF%). We calculated the dynamics of these indices after surgery: ΔS, ΔHR, ΔSDNN, ΔHF%, ΔLF%.

Results: After surgery, index S decreased (ΔS<-5%) in 26 patients, has not changed (ΔS -5% to +5%) in 18 patients and increased (ΔS>+5%) in 18 patients. Patients with ΔS<-5% had the highest value of the index S and the lowest of TR, relatively to other patients (p<0.05). In all study phases, the strong correlation was shown for SDNN and TP (R=0.86 and 0.90, p<0.05), and the medium correlation was shown for index S и TP (R=-0.41 and -0.53, p<0.05). The multiple regression correlation was identified between ΔS and following indices: S, HF%, blood glucose, cardioplegia, ΔTP, ΔHF%.

Conclusions: We revealed the heterogeneity of patients with coronary artery disease, requiring surgery with CPB, using source autonomic status and its dynamics in the early postoperative period. We showed multiple dependent postoperative dynamics of the index S with some indices, which characterize the initial status of the patient, peculiarities of the operation and dynamics of autonomic status in the early postoperative period.

Feasibility and Training of Cardiac Homograft Trimming by Surgical Assistant

Dr.Muhammad Ashraff Baruji | Sharifah Noraida Syed Nong | Siti Laura Mazalan | Mohd Nazeri Nordin

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Abstract:

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