

USE OF PERFLUOROCARBON EMULSIONS (PERFUCOL) IN CLINICAL CARDIO-SURGERY

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Infusing of cold cardioplegic solutions into the coronary bed decreases the temperature of the myocardium, the intensity of metabolic processes and oxygen demand being reduced, so the heart doesn't suffer from destructive hypoxia. Nevertheless, the existing cardioplegic solutions carry low level of oxygen. They do not provide the minimum level of oxygen that an open heart requires. Hence, the use of perfluorocarbon emulsions 'Perfucol' as a cardioplegic solution is of special interest.

17 patients had undergone cold cardioplegia at correction of severe congenital heart defects (Fallot's tetralogy and pentalogy, aortic valve stenosis) under hypothermic protection. The major vessels being occluded the preoxygenated perfluorocarbon emulsion (at 4°C) was infused into the ascending aorta at 70-80 mm Hg with the cardiac arrest of 40-70 sec. The myocardium was cooled down to 16°C. The time of the open heart is between 30 and 50 min.

Despite the severe preoperative myocardial status the cardiac function was restored without complications. The postoperative period was smooth and all the patients were discharged in a satisfactory state. There are long-term results for the period from 5 to 18 months. Reexamination showed a good condition of patients, no complaints were made.