

CHARACTERISATION OF LIPID PARTICLES IN SHED MEDIASTINAL BLOOD.

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Objective:

It is routine practice to collect shed blood from the operating wound and retransfuse it to the circulation by means of cardiomy suction. The content of this blood has been in focus lately, and special interest have been on the lipid particles found in the blood. This study aims to characterize the lipid particles found in the shed blood during surgery.

Material & Methods:

Arterial and shed blood from the pericardium was collected just prior to going on bypass in 18 patients. Lipid particle size and number were studied using both the coulter counter and laser diffraction principle. Neutral lipid profile was studied using gas chromatography.

Results:

Both coulter counter and laser diffraction revealed a distribution if these particles from at least 8 microns up to 60 microns. The concentration of particles was determined to 570 000 per ml shed blood. Gas chromatography data will be presented.

Conclusion:

This study reveals that there is a large amount of lipid particles in shed blood. The size of these particles being larger than small capillaries, and the number ending up in several millions, if extrapolated to all shed blood collected during surgery. The study does not answer the question, whether these lipid particles contributes to organ dysfunction after surgery.