P054 A new technology for standardized separation and concentration of SVF cells during liposuction

Inge Matthiesen

Human Med AG, Schwerin, Germany

A new technology for the standardized separation and concentration of stromal vascular fraction (SVF) cells from fat tissue is being described. This new technology enables the sterile separation of SVF during liposuction in a closed system. The concentrated SVF cells can be directly sampled from the system and immediately re-injected, at the point of care. The procedure of SVF cell harvesting can be carried out without centrifugation and without enzyme digestion. However, the addition of one centrifugation step will yield a considerably higher yield of SVF cells.

The system consists of the single-use Q-graft collector including various filtration steps, and the small medical device Q-graft control. The SVF cells are separated in an essentially mechanical process. The entire process is completed in the sterile area of the operating room. The process time is less than 60 minutes.

The fat is aspirated directly into the Q-graft® collector, right on the sterile operating table.

The medical device Q-graft control regulates the heating and mixing of the fat with collagenase in the incubation chamber of the single-use collector, and the rinsing of the ultrafiltration membrane during concentration of the SVF cells.

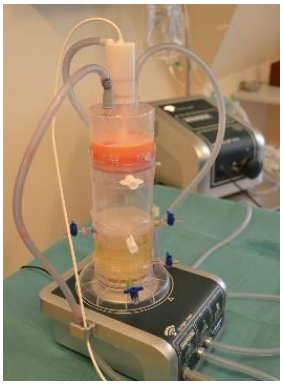

Fig. 1: Liposuction directly into the Q-graft collector in a sterile closed system

Fig. 2: Standardized SFV cell separation in various steps within the Q-graft collector

Fig. 3: Sampling of the concentrated fat-free SVF cells from the Q-graft collector