SCM and the clavicle, and is directed 10–20° anterior to the coronal plane to avoid injury to the artery or pleura. The vein is encountered quite superficially, typically at 0.5–1.5 cm depth, with a characteristic appearance as the needle enters the lumen [1–4]. Guide-wire is placed through the needle after puncture of central vein and then SVC clamp is released. Average time period of SVC clamping is 45 s. Then vein cannulation is done. Supraventricular approach is routinely used for subclavian vein cannulation in my department.

3. Discussion

Inadvertently removal of a central vein line is rarely experienced by the cardiac operation team. Pinch-off phenomenon may also develop in patients due to placing of a retractor after sternotomy. Rarely, a new central venous line may be required for inotropic administration or rapid fluid replacement. Reinsetction of a central line in alternative anatomic localizations is much more difficult during open heart surgery. Femoral veins may not be used due to inadequate draping or increased risk of infection. Brachiocephalic vein cannulation requires distension of subclavian veins. Surgeons use reverse Trendelenburg position for brachiocephalic vein distension. Hemodynamic derangement may develop during the reverse Trendelenburg position. I have clamped SVC for brachiocephalic vein distension which facilitates vein puncture. On average, 45 s clamping period is enough for a successful brachiocephalic vein cannulation. I have not experienced any hemodynamic derangement during the SVC clamping period. I usually prefer supraclavicular approach for subclavian vein cannulation which is simple and easy during open heart surgery. In addition, left jugular vein may be also used after SVC clamping. Of course, some learning curve is necessary to obtain adequate experience. Recently, I have punctured subclavian vein by supraclavicular approach in the first attempt while the heart surgery is being carried out.

References
