

Usefulness of Puncture Adapter MP-2783 for Ultrasound-Guided Central Venous Catheterization



For Enhanced Safety of Internal Jugular Vein Catheterization

With increasing awareness of safety for Central Venous Catheterization (CVC), ultrasound-guided CVC is recommended to enhance safety.

The MP-2783 kit, exclusive for internal jugular vein puncture, has been developed to enhance the advantages of CVC: safety, quicker operation and secure puncture.



Jugular Vein Puncturing

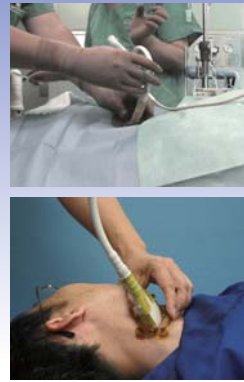
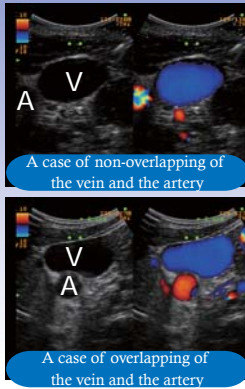
Usefulness of MP-2783

1

Locating the Common Carotid Artery and Internal Jugular Vein

Attach a high-frequency micro-convex probe (UST-987 or -9120) to the MP2783 and display the jugular vein and common carotid artery on the screen. By slowly moving the probe, confirm the positional relationship between the jugular vein to be punctured and the common carotid artery on the short-axis view. Select a position where the jugular vein and the common carotid artery do not overlap each other vertically to avoid accidentally puncturing the artery.

A : Artery
V : Vein

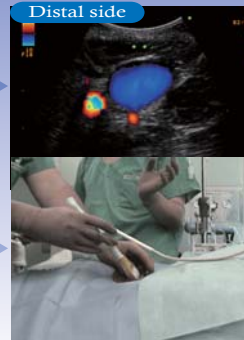
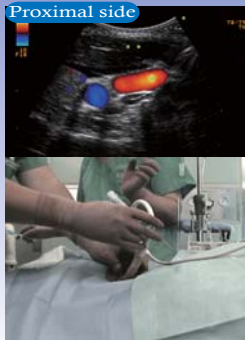


- The needle guide (base of the adapter) is equipped with legs to reduce collapse of jugular vein caused by pressure of the probe, enabling more stable imaging.
- Displacement of the vessel image caused by hand tremor is reduced because the probe remains fixed on the base.
- Vessels are easily distinguished from tissues by the Dual Dynamic Display (DDD) function (simultaneous real-time side-by-side display of B-mode images with and without color flow image). It is also easy to identify the tip of the needle.

2

Prior confirmation of puncturing route

After identifying the position to puncture, display the short-axis view of the jugular vein at the center of the screen. Swing the probe from the proximal to distal side or vice versa to confirm the path (travel) of the vessel.



- It is possible to swing the probe back and forth within 50 degrees while keeping the needle guide fixed in position. The user can confirm the path of the vessel along the route of puncturing from the proximal to the distal side while keeping the set position.



A conceptual picture showing swinging operation of the probe

3

Puncturing

Insert the puncture needle into the jugular vein while watching the needle tip on the ultrasound image.



- It is possible to swing the probe as appropriate to follow the needle point. The system helps the user to safely puncture from the superficial parts up to the jugular vein.
- ▷ : Confirm the needle tip in the proximal position.
◁ : Confirm the needle tip in the distal position.

4

Confirm Blood Ejection and Remove the Probe

Check on the ultrasound image that the puncture needle has entered the jugular vein, and apply negative pressure to confirm blood ejection.



- The probe is removed from the puncture needle with one-touch operation. The guide wire can be smoothly inserted.

5

Confirm Correct Insertion of the Guide Wire

Guide the insertion of the guide wire and confirm its position while watching the ultrasound image.



- The probe can easily be removed from the base of the adapter.
- As the probe can be handled alone, it is easy to guide the guide wire and check its position.

■ This description covers only the part specific to ultrasound-related procedures among general CVC procedures. Other procedures, such as disinfection before operation, are omitted.

■ Compatible ultrasound systems: ProSound a5, ProSound 4000 and ProSound 3500 (The compatible system versions differ depending on the model. Please ask your local distributor for details.)

■ Compatible probes: UST-9120 and -987

Appearance of the MP-2783 kit (The probe is not included in the kit.)



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