

## Vascular Access monitoring

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Vascular Access (VA) is indispensable for hemodialysis patients. In Japan, about 260,000 patients are on hemodialysis. How do we manage vascular access in our hospital? Since July 1971 we have operated over 5,000 cases of VA in our hospital. I will introduce the methods of VA monitoring in our hospital.

A patient on hemodialysis visits hospital three times per week. We have to observe their physical status of VA intensively every hemodialysis day. Physical status of VA is most important for maintenance of hemodialysis. For example, abnormal sounds, thrill and venous pressure, the swelling, the redness and the pain on the VA side limb, as well as prolonged hemostasis time are signs of VA trouble. If we notice an abnormal sign of VA, we have to take a further examination. MR angiography, 3-D CT, echography and angiography are useful in detecting cause of VA trouble. We published .Guidelines of vascular access construction and repair for chronic hemodialysis.in 2005 for Japanese hemodialysis patients. According to this guideline we should consider VA repair if VA flow is less than 500 ml/min or less than 20% than ordinary flow in AVF, or less than 650 ml/min or less than 20% than ordinary flow in AVG.

We noticed that puncture trouble and inappropriate hemostasis leads to VA trouble. So in our hospital, we made a VA puncture model. Most of our staff tried this puncture model. And also we measured suitable hemostasis pressure for VA, by using a half boiled egg. As a result, puncture trouble and inappropriate hemostasis have decreased in number, which contributed to attaining on high patency of VA.

It is important to observe VA condition on every hemodialysis procedure in order to prevent VA trouble. These intensive care will prevent surgical repair of VA which must be the last procedure.