

REDUCING THE RISK OF HEMORRHAGE DURING TVT SLING PROCEDURES: INVESTIGATION BY 3D CT ANGIOGRAPHY

Reducing the risk of hemorrhage during TVT sling procedures: Investigation by 3D CT angiography

Abstract

Aims of study

TVT sling is generally performed to treat female urinary incontinence, and hemorrhage/hematoma in the vicinity of the bladder is one of the important postoperative complications of this procedure. The main cause of hemorrhage/hematoma is believed to be puncture-induced damage to vessels on the posterior surface of the pubic bone. In order to check the risk of bleeding, we observed 3D-CT angiography of the pubic area.

Materials & Methods

This study used three-dimensional CT angiography (3D CTA), a technique that has advanced markedly in recent years, to assess arterial vascularity in this area by examining the vascular phase of 3D CT obtained after a rapid injection of a contrast agent.

Results

The results showed that, although no prominent artery was seen on the posterior surface of the pubic bone in about 73% of patients, a slightly larger artery of over 3 mm in diameter was found to run unilaterally or bilaterally in the vertical direction along the posterior surface of the pubic bone in about 27% of patients.

In patients with this type of artery, the risk of vascular damage by the puncture needle is thought to be higher. Therefore, 3D CT angiography is recommended as one of the preoperative tests for patients at a higher risk for hemorrhage, such as those with anemia or bleeding tendency.

References

1. Kuuva, N. and Nilsson, C. G.: A nationwide analysis of complications associated with the tension-free vaginal tape (TVT) procedure. Acta. Obstet. Gynecol. Scand.,81:72-77, 2002
2. Roos J.E., Desbiolles, L.M., Willmann, J.K., Weishaupt, D., Marincek, B., Hilfiker, P.R.:Multidetector-row helical CT: analysis of time management and workflow. Eur Radiol. 12:680-685, 2002
3. Mitsumori, A., Yasui, K., Akaki, S., Togami, I., Joja, I., Hashimoto, H., Kumon, H. and Hirai, Y.: Evaluation of crossing vessels in patients with ureteropelvic junction obstruction by means of helical CT. Radiographics.,20:1383-1393, 2000

Specify source of funding or grant	NONE
Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
Is this a Randomised Controlled Trial (RCT)?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	no funds, no grants
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	Yes