

Uncomplicated Subacute Type B Dissections

Defining a protocol for timing and extent of intervention.

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Endovascular stent graft placement has become the most frequently used treatment for type B dissection. Although the low mortality and morbidity rates associated with type B dissection have been generally accepted, the proper timing and extent of intervention is yet to be discussed. In this article, our experience with the treatment of uncomplicated subacute type B dissections will be shared, focusing on optimal treatment timing and anatomic extent.

TIMING

Type B dissections are classified as acute, subacute, or chronic. In line with general definitions, we define the subacute phase to be between 2 weeks and 3 months. In our experience, we prefer to treat patients in the subacute phase for several reasons. First, many patients in the acute phase are hemodynamically unstable, which can lead to increased mortality. Second, we have found that the aorta may be more fragile during the acute period, leading to an increased incidence of retrograde type A dissections. However, if treatment is delayed too long, dissections can progress to a complicated state and can cause malperfusion of vital organs, resistant hypertension, enlarged aortic hematoma, or hemothorax. More importantly, aortic remodeling is less likely to occur, resulting in a chronic dissected state and potential future aneurysmal enlargement.

EXTENT

Choosing an appropriate length of the stent graft is an important and controversial issue in the treatment of uncomplicated type B dissections and specifically involves two components: coverage of the left subclavian artery (LSA) and treatment of distal fenestrations, if they exist.

Coverage of the LSA is common in our practice and is necessary in almost all cases in order to seal the primary entry tear. If the LSA is not covered, continued perfusion and pressurization of the false lumen will occur, preventing any potential aortic remodeling and possibly leading

to morbidity and mortality. Although arm ischemia is a potential concern with LSA coverage, we have found that it does not happen often, and the actual incidence is very low. If weakness or soreness occurs in some patients, the symptoms are not severe, and most will resolve without treatment.

Other concerns associated with coverage of the LSA, such as type II endoleaks and steal phenomenon, are not typically seen in our practice. We have found that the incidence of type II endoleaks is very low; however, if they do occur, the patient is observed for 6 months. If there is no resolution, simple embolization is performed. Steal syndrome is seldom observed but can be treated surgically with carotid-subclavian revascularization if it does occur.

In regard to the extent of aortic coverage, we do not pursue distal fenestrations. In our experience, the 1-year incidence of thrombosis in the false lumen is relatively high in long-term follow-up, and the possibility of remodeling the false lumen is also considerable. Thus, we minimize coverage in order to reduce the possibility of spinal cord ischemia.

CONCLUSION

In summary, our protocol is to treat uncomplicated type B dissections in the subacute phase. We prefer coverage of the LSA origin to seal the primary entry tear, but believe that coverage of the distal fenestrations is not necessary. Nevertheless, further studies need to be performed to fully define optimal treatment protocols. ■

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