Surgical treatment for Müller-Weiss Disease
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Introduction/Purpose: Müller-Weiss disease is an uncommon osteonecrosis of the tarsal navicular of unknown etiology. The surgical treatment is introduced when conservative treatments are failed.

Methods: From January 2005 to September 2014, we treated 49 patients suffering from Müller-Weiss disease, using the surgical arthrodesis of the talonavicular joint and naviculocuneiform joint with tricortical autologous iliac crest block fixed by screws and plate. They were 15 males and 34 females with a median age of 52.4 years. According to the Maceira staging system, 6 feet were grade 2, 20 feet were grade 3, 19 feet were grade 4, and 4 feet were grade 5. We reviewed the medical records of the patients and took the radiological preoperative and postoperative evaluation. The preoperative and postoperative clinical functions were evaluated using the American Orthopaedic Foot and Ankle Society (AOFAS) ankle-hindfoot Scale. To treat Müller-Weiss disease, we introduced a surgical arthrodesis of the talonavicular joint and naviculocuneiform joint with tricortical autologous iliac crest bone block fixed by screws and plate.

Results: The median follow-up was 26 months. All the feet fused solidly. The median time for complete fusion was 13 weeks. The median AOFAS ankle-hindfoot score improved from 45 points preoperatively to 86 points at last follow-up. But the symptoms free duration took 9 months in average.

Conclusion: In conclusion, the results of this series demonstrate the arthrodesis of the TNJ and NCJ with tricortical autologous iliac crest graft is a reasonable way for treatment of Müller-Weiss disease. Based on our experience with the patients, we believe that emphasis of the restoration of the length and alignment of the medial column could achieve a good outcome. The surgeon should consider the increased risk of pain along with its associated morbidity and discuss this with the patient preoperatively when considering arthrodesis.

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