

Cole Osteotomy With Modification For Midfoot Deformity

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INTRODUCTION:

Pes Cavus deformity was clinically recorded by Little in 1853. Souder in 1953 introduced the anterior tarsal resection which is a dorsal base wedge resection extending from the navicular to cuboid bone to correct cavus deformity of the foot (1). Later, Cole described an osteotomy technique that preserves the midtarsal and subtalar joints (2). However, Cole osteotomy corrects the sagittal plane, thus correcting the cavus deformity. Most cavus foot has a component of adductus deformity which is not addressed with Cole osteotomy.

We present a modification of Cole osteotomy by correcting the midfoot cavus and adductus deformity. By modifying this technique, we can achieve an acceptable correction both in the sagittal and coronal planes.

REPORT:

48-year-old man, presented with 20 years history of trauma to the left foot. Treated conservatively. Progressively developed cavo-equinovarus deformity with elements of adductus deformity of midfoot. Left hind foot fusion with a nail was done to address the hindfoot varus and tibiotalar osteoarthritis. Fractional tendon Achilles release to correct equinus. We performed a Cole osteotomy with a modification to address the cavus and adductus deformity as described below.

A lazy S incision made over the lateral aspect of the foot extending from the lateral incision made for hindfoot fusion. A plane was created between the extensor digitorum brevis and peroneal tendon to expose cuboid. Medial incision made along navicular and medial cuneiform. Anterior flap is created between these incisions. A dorsal wedge osteotomy as described by Cole with modification is made. The modification consists of lateral wedge (more cut over cuboid, middle, and lateral cuneiform). The wedge is compressed dorsally and laterally simultaneously to correct both

cavus and adductus deformity. Stabilization is achieved via footplates and headless compression screws.

Figure 1: Modification done by creating a lateral wedge in both coronal and saggital plane

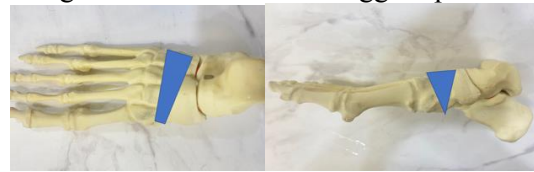


Figure 2: Pre and post operation AP radiographs



CONCLUSION:

We conclude that Cole osteotomy with modification by creating a lateral wedge is an effective and safe method to treat cavus and adductus deformity

REFERENCES:

1. SAUNDERS JT. Etiology and treatment of clawfoot: report of the results in one hundred and two feet treated by anterior tarsal resection. Archives of Surgery. 1935 Feb 1;30(2):179-98.
2. COLE WH. The treatment of claw-foot. JBJS. 1940 Oct 1;22(4):895-908.