Dorsalis pedis artery entrapment (DPA-E): what is it and what is its clinical importance?

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Disclosure
In the last 2 years I have the following potential conflicts of interest to report:


Virtual shareholder: Limflow

1. Literature
2. Patients
3. Prevalence
4. Clinical evaluation
Persistent stenosis despite multiple balloon inflation

DPA-E is a functional obstruction observed in plantar flexion of the foot and released in standard position.

DPA-E is an anatomical condition and is not related to the endovascular treatment (spasm, dissection etc.).

DPA-E can lead to functional total occlusion.

DPA-E patient 2
Baseline angiogram

DPA-E is an anatomical condition and is not related to the endovascular treatment (spasm, dissection etc.).
DPA-E patient 5

1. DPA-E is a rare anatomical condition that can affect pedal or tarsal arteries
2. It must be considered when there is a focal stenosis at the passage ATA-DPA and the patient has a plantar flexion of the foot
3. In the majority of the cases the dynamic obstruction is in correspondence of the distal astragalus

In some cases is higher, at the ankle level

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In the general population, it seems that about 2% of people have an asymptomatic DPA-E

— Duplex scan flow dynamic evaluation in 219 legs of asymptomatic pts
— Measure at 90° ankle joint and in forced plantar flexion
— 5 pts (2.3%) presented a functional obstruction which resembles a DPA-E condition
1. Literature
2. Patients
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Many patients, especially bedridden & neuropathic pts, assume a plantar flexion as the resting position while lying on the bed.

In these pts we cannot exclude that DPA-E could play a role in developing or maintaining CLI.

In the last 6 y I made ≈ 4000 angi on CLI pts and I found 15 DPA-E cases → 0.4%
In DPA-E patients, heel protectors can save heel and patency.