Cost efficiency diabetic foot infection treatment by short probabilist antibiotherapy combined with selective drainage guided by CT scan and 3D angiography.

F. Mercier[1], H Izzedine[1], P Michaud[1], N Sebbagh[1], L Saatdjian[1], M Cabral[1], H Lecoeur[1], K. Mhammedi[2], F Potier[2] J.C. Dupre[2].
[1] surgerey Clinique Internationale Parc Monceau, France.
[2] endocrinilogie-AP HP Hôpital Bichat - Claude Bernard Service d'Endocrinologie Diabète Nutrition et Maladies Métabolique Paris France - INSERM U872 Paris France

New and unconventional approach was used to treat diabetic foot infections (D.F.I).

Since 2016 a systematic 3D angiography approach of diabetic foot vascular exploration was practiced.
We noticed that vascular inflammation matched with CT scan soft tissu infection, even in atherosclerotic patients.

Excision of all infected tissues through selected 3D approach was decided. It was combined with a short term probabilist IV antibiotherapy Revascularisation was realized if mandatory.

Material :
A total of102 patients, aged 44 to 92 yd, were referred since october 2013 to june 2017 for D.F.I with or without osteomyelitis.
We selected the last18 of them, patients without osteomyelitis and classified PEDIS 3 or 4 and IDSA mild or severe.
Occurrence of a recurrent foot infection was of 40 %, new contro-lateral infection was of 45 % in our cohort, 42 % had a previous toe amputation.
Bacteriological retriaval was Gram + 32 %, Gram – 68%, MRB in 18% of total.
CRP range was 62- 230, WBC count range was 10 200 - 21 500.

Protocol :
Imaging
- CT scan identified air or fluid concentration in deep tissu
- 3D foot angiography was performed with 30 cc iodine Visipaque 320 under local anesthesia with lidocaine 1% through femoral punction assisted by Dupplex Doppler on Siemens Innova table.
Antiobiotic
- IV Amoxicilin – clavulanic acid and gentamicyn were adapted to weight and renal function. Used as probabilist antibiotherapy, vancomycin was used in 3 cases.
Surgery
- Selective excisions usually followed the tendons and were deep in the fascia plantar sole (5 to 12 cms), multiple in 8 cases to open fascia largely.

Results :
We had an amputation free cohort in these selected patients without osteomyelitis.
Length of stay range 7 to 28 days.
Cicatrisation was achieved in a range of 4 to 8 weeks.
Regularisation of CRP was achieved in a range of 4 to 8 days.

Conclusion :
High cost efficiency was achieved by low cost and short term antibiotic treatment. Prolonged selected antibiotherapy was avoided.
Foot revascularisation has to be effective.