Establishing the value of pre and per-operative wound cultures in diabetic foot infection

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Aims

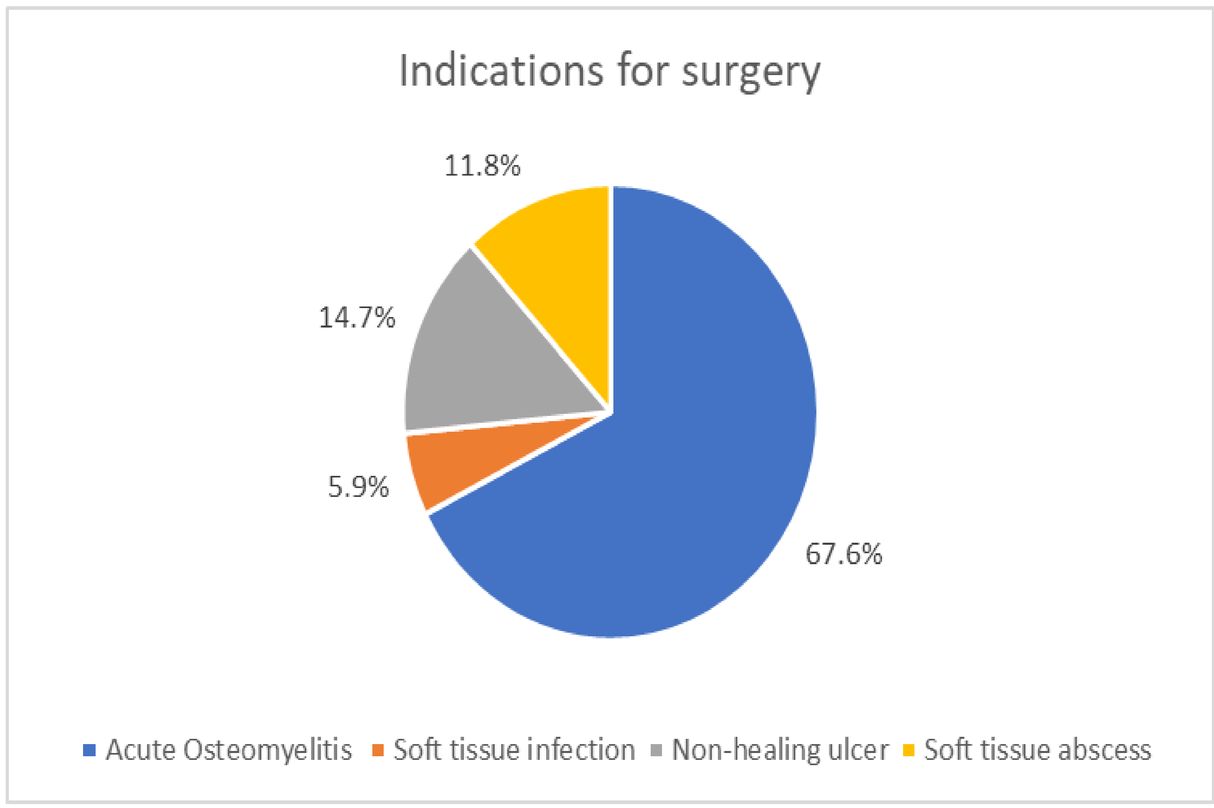
The role of pre and per-operative wound cultures in diabetes foot infection (DFI) is controversial. We evaluated the value of pre-operative wound cultures and determined the correlation between pre and per-operative wound cultures.

Methods

- *Observational study of patients who underwent foot surgery between August 2017 and December 2018 for DFI.*
- *Data collected included baseline characteristics, surgical intervention, type and duration of antibiotic treatment.*
- *Microbiology results from pre and per-operative, wound swabs and tissue cultures were compared.*

Results

- *34 patients {mean age (SD), 62.7 (15) years} underwent surgery for DFI.*
- *Surgeries performed included: amputation of toes (26.5%),*
- *soft tissue debridement (26.5%), ray amputation (20.6%) and incision and drainage (8.8%).*
- *There was no change in pre and per-operative cultures results in 59.3% patients.*
- *50% of per-operative tissue cultures were polymicrobial.*
- *56% patients, who grew mixed skin flora in pre-operative cultures, grew Staphylococcus in per-operative cultures.*



Organisms	Pre-operative microbiology cultures, n=32	Peroperative microbiology cultures, n=32	Both Positive in same patient
Staphylococcus	13 (40.6%)	24 (75%)	10
Streptococcus	7 (21.9%)	2 (6.3%)	2
Enterococcus	1 (3.1%)	3 (9.4%)	0
Gram negative	7 (21.9%)	8 (25%)	2
Pseudomonas	2 (6.3%)	3 (9.4%)	1
Anaerobes	3 (9.4%)	3 (9.4%)	2
Mixed skin flora	16 (50%)	1 (3.1%)	1
No growth	3 (9.4%)	2 (6.3%)	0
Others	3 (9.4%)	10 (31.3%)	1

Conclusion

- *Empirical antibiotic treatment for DFI should include Staphylococcus cover.*
- *Routine antibiotic cover for anaerobic organisms is not needed*
- *Mixed skin flora in pre-operative culture does not exclude deep-seated infection.*

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