Outcomes of patients with diabetic foot conditions managed using Cerament G or V: A Systematic Review

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Aim: To analyse the outcomes of diabetic foot conditions that have been managed with Cerament® G or V product.

Background

Diabetes mellitus is a significant public health concern, with patients frequently experiencing complications adding to healthcare burden. A key example of this are diabetic foot conditions, which have challenging management and serious consequences including amputation and mortality.

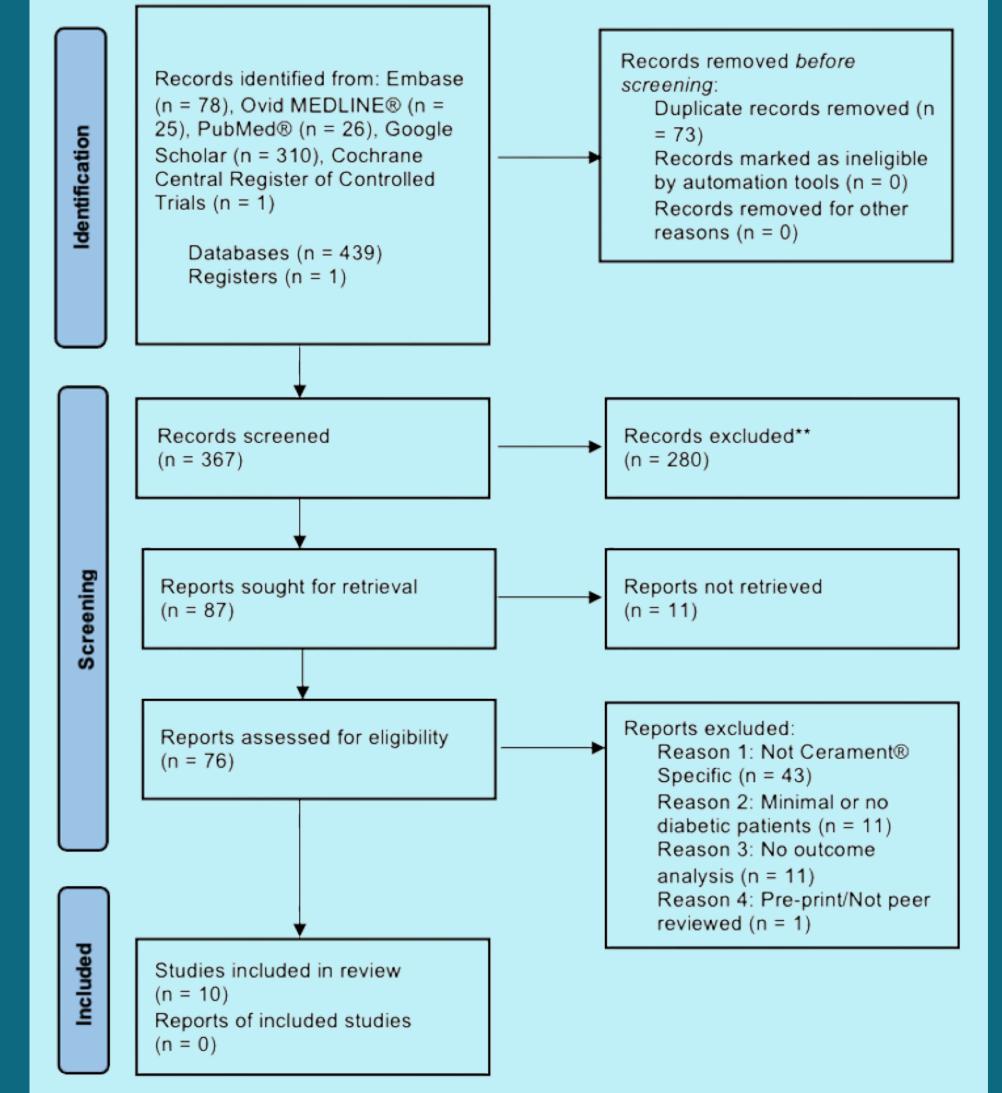
Methods

- PROSPERO ID Number: CRD420251018754
- Conducted according to PRISMA Guidelines¹
- Four databases were searched on the 17th of April 2025:
 - Embase
- Google Scholar
- Ovid MEDLINE ALL
- Cochrane Library
- PubMed

Inclusion Criteria

- Peer reviewed
- Published in English
- ✓ Use of Cerament® G or V
- Diabetic Foot Conditions
- Adults (over 18 years old)
- Used another topical intervention (e.g. Stimulan)
- Case Reports
- Limited Case Series (less
- than 5 cases)

Screening Flowchart



Data extraction was conducted manually. The 10 included studies were assessed for quality using the Newcastle-Ottawa Scale (NOS).

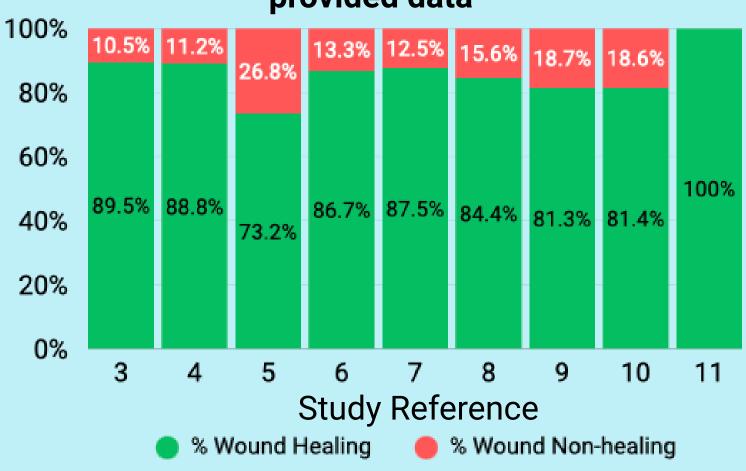
• Ten studies met the inclusion criteria²⁻¹¹.

- The included studies consisted of: 2 case series^{9,11}, 7 retrospective reviews/studies^{2-5,7-8,10}, and 1 retrospective service evaluation⁶.
- 497 diabetic feet were treated with a Cerament® product.
- All 10 studies discussed diabetic foot osteomyelitis (DFO).
- 1 study also discussed Charcot Foot Deformity⁶.
- All of the studies scored between 7 and 9 out of 9 on NOS Quality
 Assessment

Service Evaluation of: Case Series 6. Retrospective Cohort Study

Outcomes

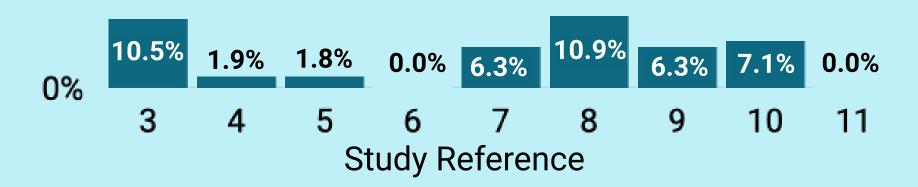
Stacked proportional bar graph showing the % wound healing in DFO for the 9 studies that provided data



The following outcomes were assessed:

- Wound Healing
- Treatment Failure
- Persistence
- Recurrence
- Re-Operation Status
- Length of Hospital
 Stay
- Limb Salvage and Amputation
- Functional Outcomes
- Side Effects and Complications

Bar graph showing the rates of major amputation (%) in DFO for the 9 studies that provided data



Conclusion

In comparison to other management options for diabetic foot conditions, Cerament® appears to have a superior impact on outcomes including wound healing and major amputation rate. Unlike long courses of systemic antibiotic use, studies using Cerament® reported no treatment limiting side effects. The published research on this topic remains limited despite its relatively high incidence and challenging nature. No randomised control trials were eligible for inclusion giving this review a limited breadth and quality of data. Further high-quality research is necessary for increased certainty in diabetic foot management.

References

(1) Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ. 2021 Mar 29;372:n71. (2) Craven J, Stephenson J, Yates BJ, Cichero M. Diabetic foot osteomyelitis treated with Surgical adjuvant antibiotic loaded bio-composite materials—A comparative retrospective cohort Study. Foot & Ankle Surgery: Techniques, Reports & Cases [Internet]. 2025 Mar 1 [cited 2025 Mar 24];5(1). Available from: https://www.fastracjournal.org/article/S2667-3967(25)00013-8/fulltext (3) Venkateswaran V, Tiruveedhula M, Edwards J, Dindyal S, Mulcahy M, Thapar A. Antibiotic Eluting Bone Void Filler Versus Systemic Antibiotics For Pedal Osteomyelitis. The Journal of Foot and Ankle Surgery. 2025 Jan 1;64(1):30–5. (4) Chow J, Imani S, Kavisinghe I, Mittal R, Martin B. Definitive single-stage surgery for treating diabetic foot osteomyelitis: a protocolized pathway including antibiotic bone graft substitute use. ANZ Journal of Surgery. 2024;94(7–8):1383–90. (5) Metaoy S, Rusu I, Pillai A. Adjuvant local antibiotic therapy in the management of diabetic foot osteomyelitis. Clinical Diabetes and Endocrinology. 2024 Dec 16;10(1):51. (6) Kavarthapu V, Giddie J, Kommalapati V, Casey J, Bates M, Vas P. Evaluation of Adjuvant Antibiotic Loaded Injectable Bio-Composite Material in Diabetic Foot Osteomyelitis and Charcot Foot Reconstruction. Journal of Clinical Medicine. 2023 Jan;12(9):3239. (7) Vasukutty N, Mordecai S, Tarik A, Subramaniam M, Srinivasan B. Limb salvage surgery in diabetic foot infection: encouraging early results with a local antibiotic carrier. 2022;25(2). (8) Hutting KH, aan de Stegge WB, van Netten JJ, ten Cate WA, Smeets L, Welten GMJM, et al. Surgical Treatment of Diabetic Foot Ulcers Complicated by Osteomyelitis with Gentamicin-Loaded Calcium Sulphate-Hydroxyapatite Biocomposite. Journal of Clinical Medicine. 2021 Jan;10(2):371. (9) Whisstock C, Volpe A, Ninkovic S, Marin M, Meloni M, Bruseghin M, et al. Multidisciplinary Approa

sulphate/hydroxyapatite biocomposite: The Silo technique. The Foot. 2018 Mar 1;34:40-4.

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