Silver Diamine Fluoride: The Silver Bullet for Paediatric Dentistry?

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Purpose
Silver diamine fluoride (SDF) has been used since 1969 for arresting caries. Due to its relevance in minimally invasive dentistry, it has had a recent surge in popularity. This literature review evaluated the success of SDF compared to conventional restorative techniques for treating cavitated lesions in the primary dentition of children aged <13 years.

Methods
A number of recognized scientific databases were searched using a focused search strategy, which was constructed using the Population, Intervention, Comparison and Outcome process (PICO). To evaluate its efficacy in treating cavitated lesions in primary teeth, SDF was compared with commonly used restorative techniques and materials such as glass ionomer cement (GIC), resin composite or preformed metal crowns. The studies included had a minimum duration of 1 year and the trial design was limited to either randomized controlled trials or systematic reviews. Studies which did not include data on primary teeth were excluded.

Results
Three papers met the inclusion criteria. SDF is more effective than GIC as a cariostatic material, with further success evident when these materials are used in combination.

Summary
There appears to be limited evidence to support the use of SDF as an alternative to commonly used restorative techniques.

Conclusions
The application of SDF is minimally invasive, painless and safe. Ease of use and low cost make it attractive to practitioners, particularly in the treatment of young or anxious children. Further research is warranted to evaluate the use of SDF as an alternative to, or in combination with, conventional restorative techniques.