

## INTISARI

*Regenerative endodontic treatment (RET)* merupakan salah satu prosedur perawatan gigi permanen imatur non vital yang relatif baru dan dapat merangsang perkembangan akar. RET dapat dilakukan menggunakan teknik revaskularisasi dengan *blood clot* atau menggunakan *platelet concentrates* seperti *platelet-rich plasma* dan *platelet-rich fibrin*. Tujuan *narrative review* ini adalah untuk mendeskripsikan kelebihan dan kekurangan *blood clot*, *platelet-rich plasma*, dan *platelet-rich fibrin* terhadap *regenerative endodontic treatment* pada gigi permanen imatur non vital dan membahas perbandingan *outcome* antara *blood clot*, *platelet-rich plasma*, dan *platelet-rich fibrin* terhadap *regenerative endodontic treatment* pada gigi permanen imatur non vital.

*Database* yang digunakan dalam pencarian referensi *narrative review* ini adalah Science Direct, Scopus, SpringerLink, ResearchGate, PubMed, dan Google Scholar dengan kata kunci (regenerative endodontic OR revitalization OR revascularization) AND blood clot AND (platelet rich fibrin OR PRF) AND (platelet rich plasma OR PRP). Artikel dan buku diseleksi berdasarkan kriteria inklusi dan eksklusi. Total referensi yang digunakan berjumlah 60.

Penggunaan *blood clot*, *platelet-rich plasma (PRP)*, dan *platelet-rich fibrin (PRF)* terhadap *regenerative endodontic treatment (RET)* mempunyai kelebihan dan kekurangan masing-masing. Berdasarkan penelitian meta analisis, *prospective randomized trial*, dan *randomized controlled trial* yang dilakukan oleh beberapa peneliti, *outcome* penggunaan *blood clot*, PRP, dan PRF terhadap RET tidak menunjukkan perbedaan yang signifikan kecuali pada penutupan apeks. PRP dan PRF menunjukkan tingkat kesuksesan yang lebih tinggi dalam hal penutupan apeks dibandingkan *blood clot*.

**Kata Kunci :** *Regenerative endodontic treatment*, revaskularisasi, konsentrat platelet

### ***ABSTRACT***

Regenerative endodontic treatment (RET) is a new treatment procedure of non-vital immature permanent teeth that can stimulate the root development. RET can be performed by using revascularization technique with blood clot or platelet concentrates, such as platelet-rich plasma and platelet-rich fibrin. This narrative review aims to describe the advantages and disadvantages of blood clot, platelet-rich plasma, and platelet-rich fibrin in the regenerative endodontic treatment of non-vital immature permanent teeth. This narrative review also discusses the comparison of the outcomes between blood clot, platelet-rich plasma, and platelet-rich fibrin in the regenerative endodontic treatment of non-vital immature permanent teeth.

The databases used as the source of references for this narrative review were Science Direct, Scopus, SpringerLink, ResearchGate, PubMed, and Google Scholar with keywords (regenerative endodontic OR revitalization OR revascularization) AND blood clot AND (platelet-rich fibrin OR PRF) AND (platelet-rich plasma OR PRP). Articles and books were selected based on inclusion and exclusion criteria. The total number of references used was 60.

The use of blood clot, platelet-rich plasma (PRP), and platelet-rich fibrin (PRF) in regenerative endodontic treatment (RET) has advantages and disadvantages. Based on the meta-analysis studies, prospective randomized trials, and randomized controlled trials conducted by several researchers, various outcomes of using blood clot, PRP, and PRF on RET do not show any significant differences, except in the case of apex closure. PRP and PRF show higher success rates in terms of apex closure than blood clot.

Keywords : regenerative endodontic treatment, revascularization, platelet concentrates