

## INTISARI

*Azithromycin* adalah antibiotika golongan makrolid yang efektif terhadap Gram-negatif aerob dan anaerob seperti *porphyromonas*, *prevotella* dan *A. actinomycetemcomitans*. Bakteri anaerob tersebut menjadi patogen pada pasien periodontitis kronis dan berhubungan dengan inisiasi maupun perkembangan periodontitis. Bakteri-bakteri tersebut dapat tumbuh dan berkembang biak dalam *gingival crevicular fluid* (GCF) yang merupakan salah satu agen pertahanan rongga mulut. Antibiotika merupakan terapi yang sering digunakan oleh dokter gigi untuk membunuh bakteri penyebab periodontitis. Di Indonesia antibiotika yang biasa digunakan untuk terapi penyakit periodontal yaitu *amoxicillin*, *metronidazole*, *tetracyclines* (*tetracycline*, *doxycycline*, *minocycline*), *clindamycin*, dan *ciprofloxacin*. Penelitian ini dilakukan untuk mengetahui perbedaan daya hambat *azithromycin* dibandingkan dengan *metronidazole* terhadap bakteri penyebab periodontitis kronis.

Penelitian ini menggunakan sampel GCF pasien periodontitis kronis yang dikultur lalu dilakukan uji kepekaan antibiotika menggunakan cakram obat *azithromycin* dan *metronidazole*. Zona hambat di ukur menggunakan jangka sorong dan diinterpretasikan.

Hasil *Mann-Whitney U test* terdapat perbedaan bermakna antara daya hambat *azithromycin* dengan *metronidazole* ( $p < 0,05$ ). Kesimpulan penelitian terdapat perbedaan daya hambat antara *azithromycin* dan *metronidazole* terhadap pertumbuhan bakteri penyebab periodontitis kronis.

Kata kunci : Periodontitis kronis, *azithromycin*, *metronidazole*

## ABSTRACT

*Azithromycin* is macrolide antibiotic that effective to inhibits the growth of aerob and anaerob Gram-negative such as *porphyromonas*, *prevotella* dan *A. actinomycetemcomitans*. These bacterias caused chronic periodontitis and related to the initiation and progression of the disease. These bacterias could grew and multiplied in gingival crevicular fluid (GCF) which was one of the oral immune substances. Antibiotic is one of the therapies the dentists used to kill the bacteria that caused periodontitis. In Indonesia antibiotics that commonly used to treat periodontal diseases are *amoxicillin*, *metronidazole*, *tetracyclines* (*tetracycline*, *doxycycline*, *minocycline*), *clindamycin*, dan *ciprofloxacin*. This study was aimed to identify the difference inhibition activity between *azithromycin* and *metronidazole* against the bacteria that caused chronic periodontitis.

This study using the GCF samples from chronic periodontitis patients. Samples were cultured and antibiotic sensitivity test were done using *azithromycin* and *metronidazole* disk. Every sample tested twice. These medias and samples were incubated for 48 hours in the anaerobic jar and *GasPack CO<sub>2</sub> generating sachet* were placed. Inhibition zone measured using sliding caliper and then interpreted.

The results *Mann-Whitney U test* showed there was a significant different between inhibition activity of *azithromycin* and *metronidazole* ( $p < 0,05$ ). The conclusion there was a different inhibition activity between *azithromycin* and *metronidazole* to inhibit the growth of bacterias that caused chronic periodontitis.

Keywords: Chronic periodontitis, *azithromycin*, *metronidazole*