

ABSTRAK

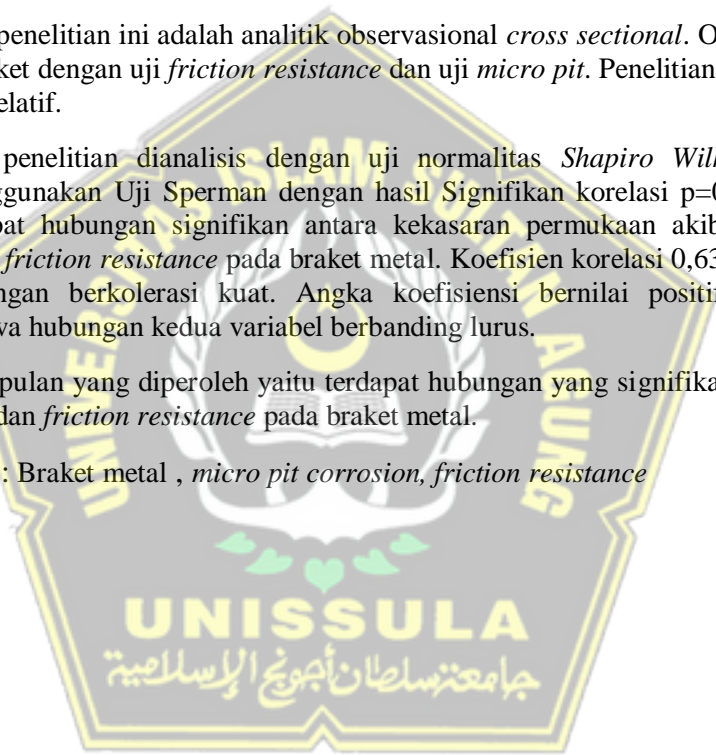
Braket ortodontik merupakan component pasif pada alat ortodontik cekat yang berfungsi menyalurkan gaya ke gigi. Braket metal dapat mengalami biodegradasi yang menyebabkan terbentuknya produk korosi. Kerusakan yang timbul akibat korosi pada logam menyebabkan timbulnya *micro pit corrosion* yang dapat berpengaruh terhadap *friction resistance*. Braket harus dapat mengatasi *friction resistance* antara *archwire* dan braket untuk mendapatkan gerakan gigi yang diinginkan. *Friction resistance* dapat mempengaruhi kecepatan gerakan gigi dan resiko hilangnya penjangkaran. Tujuan penelitian ini mengetahui hubungan antara *micro pit corrosion* dan *friction resistance* pada braket metal.

Jenis penelitian ini adalah analitik observasional *cross sectional*. Objek penelitian berupa 16 braket dengan uji *friction resistance* dan uji *micro pit*. Penelitian ini merupakan penelitian korelatif.

Data penelitian dianalisis dengan uji normalitas *Shapiro Wilk* dan analisis korelasi menggunakan Uji Spermán dengan hasil Signifikan korelasi $p=0,008$ ($p<0,05$) artinya terdapat hubungan signifikan antara kekasaran permukaan akibat *micro pit corrosion* dan *friction resistance* pada braket metal. Koefisien korelasi 0,635 yang artinya tingkat hubungan berkolerasi kuat. Angka koefisiensi bernilai positif 0,635 dapat diartikan bahwa hubungan kedua variabel berbanding lurus.

kesimpulan yang diperoleh yaitu terdapat hubungan yang signifikan antara *micro pit corrosion* dan *friction resistance* pada braket metal.

Kata Kunci : Braket metal , *micro pit corrosion*, *friction resistance*



ABSTRACT

The orthodontic bracket is a passive component in fixed orthodontic appliances has functions to transmit force to the teeth. Metal brackets can undergo biodegradation leading to the formation of corrosion products. Damage caused by corrosion of metal causes micro pit corrosion which can affect friction resistance. The bracket must overcome the friction resistance between the archwire and the bracket to achieve the desired tooth movement. Friction resistance can affect the speed of tooth movement and the risk of loss of anchorage. The purpose of this study is to determine the relationship between micro pit corrosion and friction resistance in metal brackets.

This type of research is an analytical observational cross sectional. Object of research in the form of 16 brackets with friction resistance test and micro pit corrosion test. This research is a correlative research.

The research data were analyzed using the Shapiro Wilk normality test and correlation analysis using the Spearman test with a significant correlation $p=0.008$ ($p<0.05$) meaning that there is a significant relationship between surface roughness due to micro pit corrosion and friction resistance on metal brackets. The correlation coefficient is 0.635, which means the level of the relationship is strongly correlated. A positive coefficient value of 0.635 means that the relationship between the two variables is directly proportional.

The conclusion of the research showed that there was a significant relationship between micro pit corrosion and friction resistance of metal brackets.

Keywords: Metal bracket, micro pit corrosion, friction resistance

