

ABSTRAK

Jerawat merupakan penyakit kulit yang sering terjadi pada remaja usia 16-19 dan dewasa usia 30 tahun. Faktor yang berperan dalam timbulnya jerawat ialah karena peningkatan produksi sebum atau minyak, penipisan sel keratinosit, pertumbuhan koloni bakteri penyebab jerawat dan peradangan. Peradangan ini biasanya dipicu oleh berbagai jenis bakteri salah satunya adalah *S. aureus*. Bakteri *S. aureus* dapat menyebabkan penyakit karena mampu berkembang biak dan menyebar luas didalam jaringan tubuh karena mampu menghasilkan enzim koagulase.

Penelitian ini menggunakan rancangan penelitian deskriptif kuantitatif dengan metode analisa data observasi sampel pada isolat jerawat mahasiswa TLM Poltekkes Kemenkes Surabaya. Tempat dilakukan kultur bakteri di Laboratorium Bakteriologi pada bulan April 2022. Kemudian dilanjutkan dengan pengamatan deteksi gen Coa menggunakan metode molekuler dengan cara uji DNA yang dapat didiagnosis melalui pemeriksaan *Real Time - Polymerase Chain Reaction* (RT-PCR) di Laboratorium Biologi Molekuler Jurusan TLM Poltekkes Kemenkes Surabaya.

Hasil Penelitian yang telah dilakukan dari 25 sampel isolat swab jerawat wajah ditemukan 12 sampel yang positif bakteri *S. aureus* dari kultur bakteri dan dari 12 sampel tersebut terdeteksi adanya gen Coa. Sehingga didapatkan hasil presentase 100% dari total 12 sampel.

Kata kunci : *Staphylococcus aureus*, Gen Coa, RT-PCR

ABSTRACT

Acne is a skin disease that often occurs in adolescents aged 16-19 and adults 30 years. Factors that play a role in the appearance of acne are due to increased production of sebum or oil, depletion of keratinocyte cells, the growth of bacterial colonies that cause acne and inflammation. This inflammation is usually triggered by various types of bacteria, one of which is *S. aureus*. *S. aureus* bacteria can cause disease because they are able to multiply and spread widely in body tissues because they are able to produce the enzyme coagulase.

This study used a quantitative descriptive research design with the method of analyzing sample observation data on acne isolates from TLM students at the Health Polytechnic of the Ministry of Health in Surabaya. The location for bacterial culture is in the Bacteriology Laboratory in April 2022. Then continued with the observation of the Coa gene using a molecular method by means of a DNA test that can be examined through *Real Time - Polymerase Chain Reaction (RT-PCR)* examination at the Molecular Biology Laboratory, TLM Department, Health Polytechnic, Surabaya.

The results of the research that has been conducted from 25 samples of facial acne swab isolates found 12 samples that were positive for *S. aureus* bacteria from bacterial culture and from those 12 samples the Coa gene was detected. So that the percentage of results obtained is 100% from a total of 12 samples.

Keywords: *Staphylococcus aureus*, gene Coa, RT-PCR