

## INTISARI

Rokok konvensional menghasilkan asap atau aerosol padat dan rokok elektrik menghasilkan aerosol cair. Nikotin dari kedua jenis rokok tersebut diduga dapat mempengaruhi kadar hormon kortisol dalam saliva melalui respon *autonomic nervous system* (ANS) yang disertai aktivasi *hypothalamic-pituitary-adrenal axis*. Tujuan penelitian ini adalah untuk mengetahui pengaruh antara merokok konvensional dibandingkan dengan elektrik terhadap kadar hormon kortisol dalam saliva.

Subjek sebanyak 18 laki-laki perokok terdiri dari 9 perokok konvensional dan 9 perokok elektrik, usia 20-30 tahun. Pengambilan sampel saliva pada pukul 12.00 WIB. Sampel saliva yang didapat kemudian dilakukan *5-fold dilution*. Uji kadar kortisol dalam saliva menggunakan ELISA kit (RnD Systems). Pengamatan *optical density* dilakukan pada *microplate reader* 450 nm. Perbandingan rerata kadar kortisol saliva perokok konvensional dan perokok elektrik dianalisis dengan menggunakan uji t tidak berpasangan.

Hasil penelitian mengindikasikan bahwa kadar hormon kortisol dalam saliva perokok konvensional lebih tinggi daripada perokok elektrik, meskipun perbedaan tersebut tidak bermakna ( $p > 0,05$ ). Kesimpulan dari penelitian ini ialah tidak terdapat perbedaan antara kadar kortisol saliva perokok konvensional dengan perokok elektrik.

**Kata Kunci** : hormon kortisol saliva, rokok konvensional, rokok elektrik

## ABSTRACT

Conventional cigarette generates smoke or solid aerosol and electronic cigarette generates liquid aerosol. Nicotine from both types of cigarette can affect the salivary cortisol level through autonomic nervous system (ANS) responses accompanied by hypothalamic-pituitary-adrenal axis activation. The aim of this study was to determine the comparison of the effect between conventional cigarette and electronic cigarette on the salivary cortisol level.

The subjects were 18 male smokers consisted of 9 conventional smokers and 9 electronic smokers aged 20-30 years. Saliva samples were taken at 12.00 pm. Saliva samples were then carried out with 5-fold dilution. Salivary cortisol levels were tested using the RnD Systems ELISA kit. Optical density was observed on a 450 nm microplate reader. The comparison of salivary cortisol level between conventional and electronic smokers was analyzed using independent t-test.

The result showed that the salivary cortisol level in conventional smokers were higher than those of electronic smokers, although the mean difference was not significant ( $p > 0,05$ ). The conclusion of this study that there was no difference of salivary cortisol level between conventional smokers and electronic smokers.

**Keywords** : salivary cortisol hormone, conventional cigarette, electronic cigarette