

ABSTRACT

DETECTION OF GENDARUSIN A COMPOUND IN URINE OF FERTILE MEN ON 144th DAY AFTER CONSUMING 70% ETHANOL EXTRACT CAPSULE CONTAINING *Justicia gendarussa* Burm. F LEAF DURING 72 DAY

Justicia gendarussa Burm. f has flavonoid that inhibits hyaluronidase enzyme of spermatozoa in the spermatogenesis process. Previous research reported that the major component of *Justicia gendarussa* Burm. f was 6,8-di-L-arabinopyranosil-4',5,7-trihydroxy flavones or 6,8-diarabinosylapigenin (gendarusin A). This term was dedicated to the provision of safe and effective phytopharmaceutical for men oral contraception.

The purpose of this study is for detecting compounds gendarusin A in the body subject during spermiogenesis (144th day) after consuming 70% ethanol extract capsules of *Justicia gendarussa* Burm. f. during 72 days. Detecting gendarusin A with HPLC method and compared with subjects urine sample on 72th day. Spermiogenesis process lasted for 72 days, seven subjects were treated to consume capsules which is containing 450.5 mg of ethanol extract of *Justicia gendarussa* Burm. f. for 72 days, gendarusin A inhibits the formation of the sperm enzyme hyaluronidase on the subject. Then 72 days later the subject was not given the treatment, as the recovery period. During spermiogenesis (144th day) gendarusin A must not detected in the body of the subject, because gendarusin A can affect spermiogenesis.

Separation and quantification were achieved on an Waters Novapack C18 column under gradient conditions using a mobile phase (methanol:30% aqua bidest solution) maintained at 1.0 ml/min, 30 .C at wave length 270 nm.

The calibration curve of gendarusin A peak areas (y) against the concentrations (x, $\mu\text{g/ml}$) in urine was linear and the regression equations was $y = 32,0414x - 5,4660$ ($r = 0,9952$). The recovery was 99,27%, which revealed that the accuracy of the method was satisfied. All values of the R.S.D. of intra-day precision were less than 4,12%. The LOD and LOQ of assaying gendarusin A in urine was 0.0963 $\mu\text{g/ml}$ dan 0.3208 $\mu\text{g/ml}$, respectively.

From the results of the study it was shown that gendarusin A was found in urine sample on 72th day, but on 144th day treatment, gendarusin A was not detected (concentration $<\text{LOD} = 0.0963 \text{ tg / ml}$). So, gendarusin A can not affect spermiogenesis.

Keywords: *Justicia gendarussa* Burm. f. extract; Gendarusin A; HPLC; Urine.