Pemberian laktosa pada visualisasi inti oosit domba Garut (ovis aries l.) setelah maturasi dan pascakriopreservasi = Administration of lactose for visualization of sheep oocyte core after maturation and postcryopreservation.

Andika Satria Putra Prabaswary, author

Abstrak

Penelitian mengenai potensi laktosa terhadap peristiwa swollen inti oosit domba garut (Ovis aries L.) pascamaturasi dan pascakriopreservasi telah dilakukan. Tujuan penelitian ini adalah menganalisis kemampuan laktosa serta mencari konsentrasi terbaik dalam visualisasi inti oosit (swollen) domba garut (Ovis aries L.) setelah maturasi dan pascakriopreservasi. Sebanyak 143 oosit yang memiliki kualitas A dan B (sitoplasma homogen, zona pelusida utuh, dan lapisan kumulus lebih dari 4 lapis) dimaturasi dalam medium TCM-199 dengan penambahan Bovine Serum Albumin (BSA). Oosit dengan status inti mencapai Metafase II (M-II) hasil maturasi in vitro tersebut, kemudian diberikan perlakuan laktosa berbagai konsentrasi untuk dilihat peristiwa swollen intinya. Perlakuan laktosa juga diberikan kepada oosit pascakriopreservasi dengan memperhatikan kondisi metabolisme oosit yang masih normal dan viabel. Swollen inti oosit diamati menggunakan pewarna Hoechst & PI di bawah mikroskop fluoresens. Hasil penelitian menunjukkan bahwa adanya perbedaan antarkonsentrasi secara uji Kruskal-Wallis (P > 0,05) dan konsentrasi laktosa 3% menunjukkan persentase peristiwa swollen inti oosit pada oosit pascamaturasi yang tertinggi (58,22%) dan juga pada oosit pascakriopreservasi (48,83%). Peristiwa swollen inti oosit pascamaturasi pada konsentrasi laktosa 3% memiliki perbedaan nyata dibandingkan konsentrasi laktosa 0%, 1%, dan 5%. Peristiwa swollen inti oosit pascakriopreservasi pada konsentrasi laktosa 3% tidak ada perbedaan nyata yang signifikan dengan konsentrasi laktosa 0%, 1%, dan 5%. Laktosa memiliki kemampuan untuk swollen inti oosit domba garut dan konsentrasi laktosa 3% merupakan konsentrasi terbaik yang mampu menyebabkan peristiwa swollen inti oosit domba garut pascamaturasi dan pascakriopreservasi.
.....Research on the potential of lactose against post-maturation and postcryopreservation events of oocyte core swollen of garut sheep (Ovis aries L.) has been carried out. The purpose of this study was to analyze the ability of lactose and to find the best concentration in visualizing the oocyte core (swollen) of garut sheep (Ovis aries L.) after maturation and post-cryopreservation. A total of 143 oocytes with A and B qualities (homogeneous cytoplasm, intact zona pellucida, and a cumulus layer of more than 4 layers) were saturated in TCM-199 medium with the addition of Bovine Serum Albumin (BSA). Oocytes with core status reached Metaphase II (M-II) as a result of in vitro maturation, then treated with various concentrations of lactose to see the core swollen event. Lactose treatment was also given to post-cryopreservation oocytes by taking into account the normal and viable conditions of oocyte metabolism. Oocyte core swollen was observed using Hoechst & PI stain under fluorescence microscope. The results showed that the difference between concentrations by Kruskal-Wallis test (P> 0.05) and 3% lactose concentration showed that the highest percentage of oocyte nucleus swollen events in post-maturation oocytes (58.22%) and also in post-cryopreservation oocytes (48.83 %). Post-maturation oocyte nucleus swollen events at 3% lactose concentration had a significant difference compared to 0%, 1%, and 5% lactose concentrations. The post-cryopreservation of oocyte core swollen at 3% lactose concentration was no significant difference with 0%,

1%, and 5% lactose concentrations. Lactose has the ability to swollen the nucleus of garut sheep oocytes and the 3% lactose concentration is the best concentration capable of causing postmaturation and post-cryopreservation of arrowroot oocyte core swollen events.