

## 개 신선 정액에서 column filtration에 대한 연구

김진영, 김상훈, 김수희, 이해이<sup>1</sup>, 이영준, 김용준\*

전북대학교 수의과대학, <sup>1</sup>전라북도 축산연구소 종축시험소

### Study of column filtration in fresh dog semen

Jin-Young Kim, Sang-Hoon Kim, Sue-Hee Kim, Hae-Lee Lee<sup>1</sup>, Young-Jun Lee and Yong-Jun Kim\*

*College of Veterinary Medicine, Chonbuk National University*

<sup>1</sup>*Livestock Breeding Station, Livestock Development & Research Institute of Chonrabuk-do*

**Introduction:** It is important to obtain high quality sperm from every semen sample for a successful fertilization and pregnancy. Therefore various methods were developed to obtain high quality sperm. Of which, we are to study about effect of column filtration as simple method of sperm selection.

**Material and methods:** Ejaculates were obtained from 8 dogs and analyzed with basic quality parameters before each filtration. The columns were filled with Sephadex G-15 and Glasswool. Ejaculates were filtered through each filters and assessed by recovery rate of sperm, motility, normal morphology and plasma membrane integrity(CFDA/PI stain and hypo-osmotic swelling test(HOST)).

**Results:** Significantly more sperm were recovered after Sephadex G-15 group(70.36±27.78%) compared with Glasswool group(38.49±20.29%) (p<0.05). No differences in sperm motility were significantly detected among each groups. Glasswool group was higher than Sephadex G-15 group in normal sperm morphology and plasma membrane integrity through the CFDA/PI stain (p<0.05) but no differences was shown between control and Glasswool group. The HOST score of Sephadex G-15 group was higher than that of control and Glasswool group (p<0.05).

**Clinical relevance:** The data suggest that filtration through Glasswool or Sephadex G-15 can reduce sperm with damaged physical or functional sperm plasma membrane and furthermore may improve fertility and pregnancy outcome using these simple method.

\* Corresponding author.

E-mail : yjk@chonbuk.ac.kr, 063-270-2564