Abstract P197

Two Cases of Chromosomal Translocation in Piglets Produced by ICSI

FA García-Vázquez,1 J Hernández-Caravaca2, M Martin,3 E Gómez,1 A Rodriguez,1, R Sánchez1 and J Gadea1
1Department Physiology, Veterinary Faculty, Murcia, Spain; 2Department of Anatomy, Veterinary Faculty, Cáceres, Spain; 3S INTREP, Veterinary Faculty, Cáceres, Spain

ART, including IVF and ICSI, has contributed to a great improvement of reproduction in several mammalian species. However, previous chromosome studies have cast some doubt as to whether there is a potential risk of generating chromosome damage using the ICSI technique, because incidences of structural chromosome aberrations in embryos produced by ICSI were considerably high compared to those in embryos produced by conventional IVF technique (Tateno et al. 2007). The karyotypes of 9 piglets from three different litters produced by ICSI were analyzed. Blood samples were recovered from 3 months old piglets and cultured during 72 h at 37°C in RPMI medium and stimulated with cocanavalin A. To obtain the cellular material colcemid were added to the culture and maintained for 1 h at 37°C in metaphase. Slides were treated with Trypsin and stained with Giemsa solution to generate GTG-banding. The images were captured at 1000x and processed by MetaSystem® software. At least 10 metaphasic plates per animal were examined. Two cases of reciprocal translocation (2q-; 8q+) (7q-; 4p+) were detected in two least 10 metaphasic plates per animal were examined. Two cases of reciprocal translocation (2q-; 8q+) (7q-; 4p+) were detected in two animals. These chromosome abnormalities are associated with the production of altered gametes and reproductive problems in offspring. In a normal population the prevalence of structural chromosomal production of altered gametes and reproductive problems in offspring. These chromosome abnormalities are associated with the potential risk of generating chromosome damage using the ICSI technique, because incidences of structural chromosome aberrations in embryos produced by ICSI were considerably high compared to those in embryos produced by conventional IVF technique (Tateno et al. 2007).

Abstract P199

Effects of Storage and Commercial Semen Extenders on Sperm Motility Characteristics in Cooled Semen of Duroc and Iberian Pigs

MC Gil1, MJ Bragado1, A Robina2, J Viguera2, FJ Barón1, D Martín-Hidalgo1 and LJ Garcia-Marín1
1SINTREP, Veterinary Faculty, Cáceres, Spain; 2Department of Anatomy, Veterinary Faculty, Cáceres, Spain; 3Inmasde Agroalimentaria, Madrid, Spain; 4Department of Biostatistic, Medicine Faculty, Malaga, Spain

The artificial insemination technology in Iberian pigs is currently increasing in Extremadura but little research has been conducted on commercial extenders for the semen of this breed. Our aim was to evaluate the effect of two semen extenders, MRA® and XCELL®, as well as the storage time at 17 degrees centigrade (1, 4, and 7 days) on motility parameters and percentage of hyperactivated and static spermatozoa measured by a CASA system in commercially produced semen of 6 Duroc (n = 42 doses) and 6 Iberian pigs (n = 48 doses). ANOVA and Pearson’s chi-square tests were used for the statistical analysis. The motility parameters VAP (average path velocity), VCL (curvilinear velocity) and VSL (straight-line velocity) were most affected by extenders (higher values in XCELL® during the same storage time), storage (no statistical difference between 4 and 7 days) and breed (higher values in Iberian pigs). XCELL® extender resulted in a higher percentage of hyperactivated spermatozoona (7.5% vs 4.7%, p < 0.001) and a lower number of static spermatozoa (10.8% vs 15.6%, p < 0.001). There was a marked effect of the extender on the percentage of static spermatozoa on day 7 of storage (MRA 22.5%, XCELL 13.6%; p < 0.001). XCELL® preserved sperm motility better than MRA when cooled boar semen was stored up to 7 days. (Supported by CTIT-1-2008-0698)

Abstract P201

Placental Characteristics in Belgian Draught and Warmblood Horses

J Govaere, M Hoogewijns, C De Schauwer, K Smits, E Van Haesebroeck and A de Kruif
Department of Reproduction, Obstetrics and Herd Health, Faculty of Veterinary Medicine, Ghent University, Belgium

Weighing the equine placenta is a routine way to esteem possible inflammation and to assess foal viability. Therefore knowledge of normal placentals weights in different breeds is essential. Placentals weights of 51 Belgian Draught mares (BDH) and 117 Warmblood horses (WB) were measured. Only mares with an uncompromised pregnancy and peri-parturient period and with normal placental thickness on ultrasound examination were considered. Average values and standard deviations were calculated and Pearson correlations were analysed. On average the foals weighed 72.6 kg (SD 9.6) and the placenta’s 5.7 kg (SD 1.1) in the BDH and 55.8 kg (SD 8.4) and 5.6 kg (SD 1.4) in the WB. Placental weight as percentage to the foal’s weight was 8.1% (SD 1.6) for BDH and 10.06% (SD 2.2) for WB. Positive correlations were found between parity and weight of the foal in BDH (r = 0.31, p = 0.010, n = 18) and in WB (r = 0.223, p = 0.008, n = 117) and between parity and the placental weight in BDH (r = 0.479, p = 0.022, n = 49) and in WB (r = 0.263, p = 0.003, n = 107). The data of the BDH population shown in this study are in contrast with those found WB in and most other breeds. Possible explanations might be the limited data, inaccuracy in measurements, breed differences in foetal activity, placental efficiency, micro cotyledon surface density and inbreed ratio. Further research to test those hypotheses is in progress.

Abstract P203

Effects of Reducing Interval from GnRH to PGF2α in Ovsynch Protocol on Pregnancy Rate in Cyclic Lactating Dairy Cows

A Gumen1, A Keskin1, G Yilmazbas1, E Karakaya1, V Celik2 and K Seyrek-Intas1
1Faculty of Veterinary Medicine, Bursa, Turkey; 2TARFAS, Bursa, Turkey

The aim of this study was to compare pregnancy rates (PR) in Ovsynch vs Modified Ovsynch (interval between first GnRH to PGF2α decreased to 6 d) in cycling lactating dairy cows. This study was conducted on one commercial dairy herd (800 lactating dairy cows) located in Turkey. The day of first GnRH of Ovsynch was designated day 0. The ovaries of cows were examined by ultrasonography twice, 1 week apart, to determine cyclic cows (had CL on either ovary) from 7 to 0 days. Cyclic cows (n = 480) were divided into 2 groups: Controls (n = 250) received an Ovsynch protocol (GnRH-7d-PGF2α-5th-GnRH-18h-AL) and treated cows (n = 230) had a Modified Ovsynch (MOV) protocol (GnRH-6d-PGF2α-5th-GnRH-18h-AL). Ultrasoundonography was performed at each injection, at AI and 7 d after AI to determine ovulation. Pregnancy diagnosis was performed 30 days post-AI by ultrasonography. After first GnRH, ovulation rate was similar between Ovsynch (54%, 135/250) and MOV (61%, 109/211) groups, but did not improve pregnancy rate in cycling dairy cows. (This study is supported by Turkish Academy of Science (TUBITAK, TIVAG 107227))