

하나 SPA가 진행되는 동안에 HP에 의한 막지질 과산화 등의 부정적 영향이 크지 않아 SPA 결과에 크게 저하시키지 않는 것으로 사료된다. 또한 SA와 HP는 SPA 결과를 저하시키는데 상승적효과를 보이는 것으로 사료된다.

## P-4

### Association of Reproductive Abnormalities with Pericentric Inversion of Chromosome 9

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Pericentric inversion of the chromosome 9, inv(9)(p11;q13), is occurs commonly with an incidence of 1% to 1.65% and some cytogeneticists would consider it as a normal variant. This entity is categorised as a minor chromosomal rearrangement with normal phenotypes. However, many reports in the literature suggested that it may be associated with subfertility, recurrent abortions or other chromosomal abnormalities arising as a result of having inv(9). Herein, we analyzed the incidence and clinical significance of inv(9) among those who had reproductive abnormalities. Peripheral blood karyotypes(2070 cases) performed due to recurrent spontaneous abortions or infertility in Samsung Cheil Hospital over the last six-years were selected. Cases for prenatal genetic diagnosis were excluded from this study. Thirty one cases from 30 couples had inv(9)(p11;q13) which gave an incidence of 1.5%. One case of inv(9)(p12;q12) was found and excluded from the statistics. There were two cases with 47, XXY,

inv(9). Among 30 cases with inv(9), 22 couples(73.3%) had history of more than two spontaneous abortions. Five families(16.7%) had the problem of infertility. Three couples(10%) previously had babies with major congenital anomaly. Interestingly, one case had homologous inversion 9 but she was phenotypically normal. Although there may be a selective bias because relatively older subfertile couples were included retrospectively, these data suggest that inv(9) may often cause clinical problems such as recurrent spontaneous abortions, subfertility or chromosomal abnormality in the offspring of the carriers.

## P-5

### Applications of PCR and Prins for the Sexing in Bovine Preimplantation Embryos

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Predetermination of sex in preimplantation embryos is of great value in the domestic animal production and clinical medicine since it provides a means to select animal sex of interest and diagnosis the human genetic diseases prior to implantation. Polymerase chain reaction (PCR) and primed *in situ* DNA synthesis (PRINS) were used to determine the sex of *in vitro* fertilized bovine embryos. Eight-cell to morulae stage embryos were obtained from *in vitro* fertilization (IVF) and subsequent coculture with oviductal epithelial