of fetal abnormalities detected by routine ultrasound scanning. Trisomy 18 was found in one of these fetuses.

Conclusion: The obstetric outcome in children born after ICSI as a whole is comparable to that of conventional IVF pregnancies with multiple births being the major problem. The gestational age and birthweight in singletons were higher than usually reported for IVF. A possible increase in malformations has to be confirmed in further studies with adequate control groups. No increase in malformation rate was seen in any of the subgroups of different sperm origin. No sex chromosome abnormalities was found.

10.15–10.30

O-105. Follow-up of 100 children, aged 1 and 2 years, born after intracytoplasmic sperm injection

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Introduction: Intracytoplasmic sperm injection (ICSI) is considered a major breakthrough in the treatment of male infertility. Its rate of success is so impressive that it has been carried out worldwide soon after its discovery without any experimental phase. Concern is being expressed about possible long-term damage hidden in the genetic material of these children. Until now, most reports about their physical and mental health have been reassuring. Our aim was to ascertain the medical and developmental outcome of the children aged 1 and 2 years born after ICSI performed in the CHUV.

Materials and methods: Among the pregnancies induced by ICSI performed between 1994 and 1996, there were 84 deliveries of which 107 children were born alive. Four families left the country without leaving any forwarding details. This study was subsequently carried out on 100 children (39 girls and 61 boys), resulting from 80 deliveries, among whom there were 16 twin and two triple births. The average maternal age was 31.4 ± 3.9 years. The mean gestational age was 38.6 ± 2.3 weeks. The average birthweight was 2823 ± 696 g. ICSI was performed with ejaculated spermatozoa in 73 cases, with epididymal spermatozoa in six cases, and testicular spermatozoa in one case. The transfer was performed with fresh embryos in 67 cases and thawed embryos in 13 cases. We used two different questionnaires: (i) the medical data concerning the pregnancy and the delivery were collected through 'questionnaire 1' filled out by the obstetrician, (ii) the follow-up of the childrens' physical and mental development was carried out using 'questionnaire 2', provided by Dr Bonduelle, VUB. This questionnaire was completed after a telephone inquiry between the investigator and one of the parents.

Results: 'Questionnaire 1' showed that two children had major malformations detected at birth: one of them suffered from trisomy 21 (the mother had not wanted to terminate the pathological pregnancy that had been detected by the triple test) and the other child had severe internal malformations (oesotracheal fistula with tracheal atresia, pulmonary atelectasy, and renal ectopy). 'Questionnaire 2' showed that: (a) nine children had minor malformations which had not been detected at birth: there were three cases of phimosis, two cases of bilateral inguinal hernias and one case of the following: unilateral inguinal hemia, hypospadias, haemangioma, bilateral testicular hydroceles and a toe malformation, (b) 99 children showed normal physical and mental development: 54 children at the age of 2 years and 45 children at the age of 1 year. Difficulties in the collection of data for both questionnaires were mainly due to (i) the patients changing their address, (ii) the obstetrician not returning the questionnaire to us. Two per cent of these children suffered from major malformations, which were noted at birth, through 'questionnaire 1'. Nine per cent suffered from minor malformations which were not noted at birth, but were detected through 'questionnaire 2'.

Conclusion: The obstetrical questionnaire, which is generally used in the national registers, proves to be insufficient for detecting minor malformations among children born after ICSI. Even though there is evidence that ICSI results in normal pregnancies, regular follow-up of these children from their time of birth ideally up to their reproductive age is recommended. A simple annual telephone call could be used and the follow-up conducted in a fully transparent manner with the children and their parents. Long-term follow-up requiring an efficient network would be necessary only in the abnormal cases detected by 'questionnaire 2'.

10.30–10.45

O-106. Chromosomal anomalies and malformations after ICSI without the use of PVP

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Introduction: The long-term follow-up of pregnancies and children born after ICSI is henceforth of absolute necessity. In this respect it seems to be interesting to evaluate the results of our programme, because we never used polyvinylpyrrolidone (PVP) for the immobilization of spermatozoa. PVP as an unnatural chemical substance was repeatedly considered to have a detrimental effect on embryonic development. Though the data of large ICSI surveys conducted in centres using PVP are reassuring, the need for the long-term comparison still remains.

Materials and methods: Out of the nearly 1000 pregnancies achieved after ICSI, the data of 570 newborns were evaluated by a routine paediatric follow-up. Fresh and frozen-thawed cycles, pregnancies from ejaculated and surgically retrieved spermatozoa were analysed together. Fetal karyotype was performed where possible on amniocentesis samples. A total of 271 chromosomal complements were documented; some of the pregnancies after prenatal diagnosis are still ongoing. In addition, the karyotypes of male partners with a sperm count $<10\times10^6$ or with severe asthenozoospermia were also examined. The malformation rate of singleton and multiple pregnancies was evaluated separately.

Results: In total, 22 major malformations were reported, 13 in singleton and nine in twin pregnancies. The overall