were administered surfactant, and 30% received antibiotic therapy. The risks of neonatal diseases increased with decreasing GA, with odds ratios ranging from 2.1 to 23. Low birth weight for GA was more common at lower GA and was associated with increased risks for morbidity.

Conclusions: Despite general advances in perinatal care, moderately preterm infants still face substantially increased risks for neonatal diseases, and these risks increase linearly as GA decreases. Whereas neonatal morbidity was similar to results of previous reports, management of respiratory problems was found to differ markedly from other studies.

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INCREASED RISK OF CEREBRAL MRI PATHOLOGY AND NEUROIMPAIRMENTS IN ADOLESCENTS BORN AS LATE PRETERMS WITH VERY-LOW-BIRTH-WEIGHT (VLBW)

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Backgrounds and aims: Studies of moderate to late preterms have reported increased risk of neuroimpairments in this group of children. The aim of study was to report neurodevelopment and MRI findings in adolescence in two groups of very low birth weight (1500 g) children: one very preterm with gestational age (ga) < 30 weeks and one moderate to late preterm group with ga = 30-35 weeks, compared with term born controls.

Methods: Thirty-eight very preterms, 25 moderate/late preterms and 83 term born controls were evaluated with the following tests: M-ABC, Grooved Pegboard, VMI, WISC-III, Wisconsin Card Sorting, Stroop, Knox Cube and Trail Making tests to investigate motor, perceptual, cognitive and executive functions at age 14. Morphometric MRI and DTI were performed to assess signs of perinatal cortical and white matter pathology.

Results: The clinical test scores were similar in the two preterm groups, and significantly worse than in controls. Both preterm groups had more MRI pathology like ventricular dilatation, white matter reduction, and thinning of corpus callosum than controls. On quantitative MRI both preterm groups had similar and lower FA values in most major tracts compared with controls. They also shared mostly the same areas with cortical thinning compared with controls.

Conclusions: The moderate preterm adolescents had similar neuroimpairments compared to very preterms despite less perinatal illness at age 14. Quantitative MRI measurements showed that white matter microstructure and cortical development were similarly affected in the two preterm groups, which may explain the clinical results.

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EPIDEMIOLOGICAL CHARACTERISTICS OF ESOPHAGEAL ATRESIA IN EUROPE, 1222 CASES

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The objective of this study was to describe prevalence and epidemiologic data on esophageal atresia from 23 well-defined European regions and to compare prevalences between these regions. We wanted to characterize the cases as syndromic, multiple malformed or isolated. Furthermore we wanted to characterize the cases with regards to gender, birth type, gestational age, birth weight and survival.

The study is based on data from 23 European registries of congenital malformations (EUROCAT). For further details see www.eurocat.ulster.ac.uk/memberreg/. All cases with ICD9 and ICD10 code with EA born 1987-2006 were included. The total number of births was 5,027,181.

1222 cases of EA were recorded giving an overall prevalence of 2.43 per 10,000 births. There were large regional differences in the prevalence. Also the prenatal detection rates showed large regional differences.

57.3% of cases were boys. 70.5% had a tracheo-esophageal fistula along with the atresia.

88.7% of cases were live births, 3.5% were still births and 7.8% were termination of pregnancy. Mean birth weight in the liveborn cases was 2462 ± 766 grams and median gestational age was 38 (35-39) weeks.

The cases were classified in three groups: 44.7% had isolated esophageal malformation, 31.6% were multiple malformed, 23.7% had an association or syndrome.

During the study period the prenatal detection rates increased.

There are large regional differences in the prevalence and in the prenatal detection rate.

After diagnosis of EA, it is important to evaluate the infant for associated malformations or syndromes, as these are present in more than half of all cases.

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HIGHER RATES OF BIRTH DEFECTS IN NEWBORNS AFTER ICSI PREGNANCY

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The Assisted Reproductive Techniques (ART) have become a routine infertility treatment. International data suggest the high rates of multiple pregnancies, prematurity, low birth-weight, neonatal morbidity/mortality in ART conceived births. Correlation between ART pregnancy and birth defects is not well established yet.

The aim of this study is to compare neonatal outcomes in ICSI-induced pregnancies vs IVF-induced pregnancies delivered at Rome's Gemelli Hospital.

We studied 322 infants conceived through assisted reproductive technology: 147 ICSI and 175 IVF. All newborns were evaluated for prenatal outcomes (maternal age, pregnancy complications) and neonatal outcomes (gestational age, birth-weight, major neonatal diseases, congenital malformations).

32.2% were singletons, 54.2% were twins and 14.6% were triplets.

No significant differences were observed in prenatal outcomes, gestational age (35 ± 2 vs 34 ± 3) birth-

weight (2325 ± 668 vs 2318 ± 759) and major neonatal diseases (34.01% vs 27.42%) compared ICSI/IVF groups. A significant higher rate of malformations in ICSI-group was observed (11.5% vs 5.1% $p < 0.03$): 7 cases of heart defects (4.7%), one case of SNC defect (anencephaly), three cases of clubfoot, three cases of urinogenital defects and three cases of syndrome (2 Down's syndrome and 1 Larsen's syndrome).

No differences we observed in singleton, twins and triplets comparing ICSI/IVF groups.

Our study suggests a significantly increased risk of congenital malformations in ART conceived births. The higher rate adverse neonatal outcomes and malformations in ICSI-group may be due to micromanipulation of gametes or unknown characteristics in the couples who undergo ICSI-treatment.

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DEVELOPMENT, BEHAVIOR PROBLEMS, AND HEALTH-RELATED QUALITY OF LIFE IN EIGHT-YEAR-OLD CHILDREN WITH DOWN SYNDROME

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Objective: Children with Down syndrome (DS) have delayed psychomotor development. We investigated levels of development, problem behavior, and health-related quality of life (HRQoL) in Dutch eight-year-old children with DS. Developmental outcomes were compared with normative data of eight-year-old children from the general population.

Methods: We enrolled 337 (~40% of the total population of) children with DS born in the Netherlands between 1992 and 1994 with DS. Developmental skills were determined by means of the McCarthy Scales of Children's Ability. To measure emotional and behavioral problems we used the Child Behavior Checklist. The HRQoL was assessed with the TNO-AZL Children's Quality of Life (TACQOL) questionnaire. Students' T-tests were applied to compare groups.

Results: Mean developmental age in boys with DS was 3.6 years (SD 0.85), in girls 4.2 years (SD 0.82) ($p < 0.001$). Mean developmental age was substantially lower than the mean calendar age