Chromosome aberration detected by amniocentesis
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Objective
To retrospectively investigate the 10-year experience of prenatal diagnosis of fetal chromosome aberrations by second-trimester amniocentesis.

Methods
Data was collected at Department of Obstetrics & Gynaecology of General Hospital of Chania between 2005 and 2014 from cytogenetic analyses of cultured amniocytes from second-trimester amniocentesis. The main indications for amniocentesis included advanced maternal age, abnormal maternal serum screening results and abnormal ultrasound findings. Chromosome aberrations included autosomal aneuploidies, sex chromosome aneuploidies, polyploidies, and rearrangements. Variant chromosomes were considered to be normal and excluded.

Results
A total of 1070 amniocenteses were performed and analysed for chromosome aberrations. Among these, 592 (55.4%) were for advanced maternal age, 218 (20.3%) for abnormal maternal serum screening results, 129 (12.05%) for abnormal ultrasound findings and 131 (12.25%) for other reasons. The highest detection rate of chromosome aberrations was in cases undergoing amniocentesis for abnormal ultrasound findings (8.86%), followed by other reasons (2.74%), abnormal maternal serum screening results (2.6%), and advanced maternal age (2.31%). Chromosome aberrations were detected in 31 cases (2.9%), including fetuses of 14 older mothers, 6 mothers with abnormal serum screening results, 8 mothers with abnormal ultrasound findings, and 3 mothers with other reasons for amniocentesis. Of fetuses with chromosome aberrations, 22 (70.96%) had trisomy 13, trisomy 18, trisomy 21, or sex chromosome disorder. The other 9 cases (29.04%) included balanced translocation, unbalanced abnormality, inversion, and marker chromosome.

Conclusion
Based on this study of prenatal diagnosis of chromosome disorders, we did not find an apparent change compared with previous reports, but, our data has allowed for the establishment of another database for genetic counseling, and the discovery of an abnormality allows the option of termination or, later in the pregnancy, more suitable obstetric management.