156 ANTENATAL SCREENING FOR CHROMOSOMAL ABNORMALITIES: COST EFFECTIVENESS AND OUTCOME

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Background and aims: As an essential part of antenatal care, pregnant women of all ages should be offered screening for chromosomal abnormalities before 20 weeks gestation. This study was aimed to evaluate the type and frequency of chromosomal abnormalities following pregnancy screening tests so that we can compare the actual pregnancy outcomes with test results, this will help us in decision making whether the tests are reliable to use in practice or not.

Methods: A "cross-sectional" study was conducted on 557 pregnant patients, presenting for prenatal diagnostic amniocentesis for chromosomal abnormalities, to Tabriz Al-Zahra Hospital since 2008 to 2011. Amniocentesis was conducted by an expert obstetrician at second trimester between 16 and 22 weeks of gestation. 15 to 20 ml of amniotic fluid was aspirated for chromosomal study. An interview was set for pregnancy outcomes to assess the test results.

Results: Of 557 cases, the mean maternal age in amniocentesis was 31.84±6.92 y (range, 15-47y). Amniocentesis revealed the presence of chromosomal abnormalities in 32 cases (5.74%) including 18 girls (56.25%) and 16 boys (43.75%). The most common diagnosed chromosomal abnormality in studying cases was Down syndrome (50%) followed by other chromosomal abnormalities. Following up the patients, 92.4% of newborns did not have any congenital abnormality, but the remaining 7.6% had both chromosomal and non-chromosomal abnormalities. No fetal loss was reported in this study. So the effectiveness of this test was evaluated 75.52%. Assessment of total costs revealed that $US100 had been spent for hospitalization, and about $US500 for genetic tests. Also, the cost of three days hospitalization for pregnancy termination was evaluated as about $US1000.

Conclusion: Several studies have evaluated the cost-effectiveness of each diagnostic method for detecting chromosomal anomalies. There is still no consensus on the most cost-effective strategy that should be implemented to diagnose chromosomal anomalies. So we didn't have an actual gold standard to compare with amniocentesis. More studies analyzing

natural outcome after prenatal diagnosis of these chromosomal abnormalities are needed.