161. Determination of Alpha-Fetoprotein in Dried-Blood Spot on Filter Paper for Maternal Screening. K.J. Hsiao, H.J. Chuang*, M.L. Yang[1], S.C. Ho[2], C.C. Lie[2], S. Liao[3] Depts. of Med. Research and Obs. and Gyn.[1], Veterans General Hospital, Taipei; Dept. of Obs.and Gyn., Veterans General Hospital, Taichung[2]; Health Bureau, Nan-tou County[3], Taiwan, ROC.

A sandwich alpha-fetoprotein enzyme immunoassay method, which was established for the liver cancer screening test (Clin Chem, 1986;32; 2079-82), was adopted to determinate the maternal blood alpha-fetoprotein (MAFP) for screening of neural tube defects and chromosomal abnormalities. We collected the blood samples from 1859 apparently healthy pregnant women with gestational age between 10 and 25 weeks to establish the reference range of the MAFP in whole blood for the Chinese . The median of the reference range with the same gestational week was used to calculate the multiple of median (MOM) for each individual MAFP. During Jan.-Nov. 1987, a pilot screening program was carried out in Nan-tou County. Blood spot samples were collected from 2351 pregnant women all over Nan-tou County, and were mailed to the labortory (V.G.H.,Taipei) for test. 97 (4.13%) cases were found with the MAFP greater than 2.5 MOM. One case each of anecephalus, hydrocephalus, mole, and 3 stillbirth cases were detected among the 97 cases. There were 55 cases (2.34%) with MAFP below 0.25 MOM. Up-to-date (Dec.'88) no chromosomal abnormality has been confirmed. Using dried-blood samples on filter paper is a convenient method for the sample-collecting, transporting, and preservation. It could be applied to develop a mass maternal screening program, espically for the rural areas in Taiwan.

162. HUMAN FOLLICULAR FLUID STIMULATES HUMAN SPERM MOTILITY H.T. Chao*, S.H. Kou, Y.H. Wei, H.T. Ng and C.Y. Hong
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Biochemical components and physiological functions of human follicular fluid (hFF) have not been extensively studied because of the difficulty to obtain this substance. We collected hFF during laparoscopic oocyte pick up for in vitro fertilization (IVF) program. Then the effect of hFF on human sperm motility was studied with a trans-membrane migration method. This method measured the proportion of sperm that moved across the 5 micron pores of a Nuclepore membrane from sperm-hFF mixture into phosphate buffered saline (PBS). Freshly ejaculated sperm were washed with PBS. Washed sperm were then mixed with either PBS or hFF. Motility of hFF-treated sperm were 83% higher than that of PBS-treated sperm. The stimulatory effect of hFF was lost if the hFF had been pre-heated at 100℃ for 30 minutes. We also found that the human cervical mucus potentiates the stimulatory effect of hFF. We concluded that there is a heat labile factor(s) in hFF that stimulate human sperm motility. Whether this factor can be used to improve the successful rate of IVF and GIFT awaits further investigation.