346 In situ hybridization study of human parvovirus B19 in hydrops fetalis. H.Oka, T.Arai, R.Izumi, Y.Matunaga*, Dept.Obst.and Gynec., Toyama Med.and Pharmaceut.Univ., Toyama, *Dept.Central Virus Diagnostic Laboratory, National Institute of Health., Tokyo.

Fetal infection by human parvovirus B19(HPV) is an important cause of hydrops fetalis. However, a mechanism of the development of the disease is not yet known. Therefore we established in situ hybridization (ISH) technique using HPV DNA probe, and investigated the injuries on various fetal organs by observation of localized HPV DNA. [Method] ISH was done using biotinylated HPV DNA probe. Materials were liver, spleen, heart, lung, kidney, brain, intestine, adrenal gland, iliopsoas muscle, and thymus of fetuses infected by HPV. [Result] Nuclei of erythroblasts were positive of HPV DNA in investigated all tissues. But HPV DNA was not detected in any of cells composing each organs, including myocardium. [Conclusion] We first established ISH using HPV DNA probe in Japan and clearly localized HPV DNA in erythroblasts of infected fetuses with hydrops. Even a tracing evidence of HPV DNA could not be found in myocardial cells. The result does not support the hypothesis that direct myocardial injury by HPV infection is a primary cause of hydrops fetalis infected HPV.

347 Actual state of rubella IgM test. T.Hoshiba, H.Nishimoto, A.Asamoto, Y.Yabuki, Dept.Obst.and Gynec., Ishikawa Prefect.Central Hosp., Ishikawa.

The accuracy of rubella IgM test recently performed by 5 largest commercial laboratories (S,M,B,R,O) were investigated with 80 sera of 30 rubella patients. Kits in use were Rubazyme M (r), Enzygnost (e), Rubella IgM-EIA seiken (d), and laboratory-made ones (s, s',o). In 1987 only 53% of 34 rubella HI antibody positive sera were IgM positive within one month after rash according to S-s. In 1988 when examined serial sera of one patient, sensitivity of S-s' was yet low and O-o showed remarkable false positive. Other 3 laboratories with r and e showed almost the same IgM persistence of 1.5 months. In 1990 twenty sera of 5 patients were examined. S-d, M-d and O-o showed prolonged persistence of 1.5 months to over 1 year. Positive period of B-e and R-r were 1 to 3, and 1 to 4 months, respectively. Generally with commercial kits except d, rubella IgM persistence is about 1 to 3 months. Unreliable laboratory-made kits should be avoided. It is dangerous and irresponsible to use IgM test without the knowledge of accuracy of the laboratories' data for study, not to mention of clinical practice. To establish the system to examine the accuracy of data from commercial laboratories is urgently required.

348 Change of human papilloma virus (HPV) DNA copy number during the course of the treatment for genital condyloma. T. Nakamura, Y. Matumoto, K. Tamura, S. Tsucida, A. Yamamoto, S. Yamagata, T. Sugawa, *A. Tamura, Dept. of Obst. and Gynec., Osaka City Univ. Sch. Med., Osaka, *Dept. of Obst. and Gynec., Kitahorie Hosp., Osaka.

Change of HPV DNA copy number during the course of the treatment for genital condyloma was investigated in this study. 40 patients were treated with topical injection of interferon alpha (IFN) (3 or 6 × 10^6 IU, thrice weekly for 10 times). To another 22 patients, 25% podophyllin ethanol solution was applied topically every other day for 3 or 6 times. The cell materials from cervix or vagina were collected before and after treatment. Dot blot hybridization was carried out and HPV DNA copy number per single epithelial cell was calculated. HPV DNA copy number decreased in almost all the patients treated, however, HPV DNA was detected even in 5 of 16 cases who were treated with IFN and had complete clearance of warts clinically. On the other hand, in 12 cases who had good effect with podophyllin, HPV DNA was not found by DNA hybridization. But, in about 89% of the patients, who were considered to have clearance of HPV DNA, polymerase chain reaction method showed residual HPV DNA. This indicated that remnant HPV DNA might be related to high recurrence rate of this disease after treatment, and new or intensive therapy is required for complete clearance of HPV DNA.