472 The relationship between sperm-immobilization test and immunobead test.
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The sperm-immobilization test(SIT) and immunobead test(IBT) were compared with special reference to the clinical significance in detecting antisperm antibodies. IBT was carried out for 310 infertile male and female patients. Positive result in IBT was designated when immunobeads attached to more than 20% of motile spermatozoa. SIT was carried out following Isojima's method. Results were as follows. 1)Four males and nine females showed positive SIT. 2)All of eleven sera with positive SIT showed almost 100% IgG-immunobead(IB) binding, whereas three of them didn't showed IgA-IB binding. Fifty one sera with negative IBT showed also negative SIT. 3)In 9 of 11 sera with positive SIT, IgG-IB binded to both heads and end-tails of spermatozoa. But two of them showed IB-binding at only end-tail part. 4)IBT of follicular fluid collected at the time of IVF-ET showed the same results as that of sera. 5)In direct IBT with three positive SIT, IgG-IB attached almost 100% of spermatozoa, whereas IgA-binding rates were variable. 6)In the seminal plasma, two with positive SIT showed also positive IBT. These results suggested the following conclusions. 1)Sperm-immobilization antibodies were mainly related to IgG-immunogloblins. 2)Sperm-immobilization antibodies were not monochronal. 3)IBT of sera was among qualitative methods for detecting sperm-immobilization antibodies. 4)IBT could be served as screening test of SIT.

473 A new simplified and highly sensitive reagent for measuring urinary luteinizing hormone.
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To predict ovulation more easily, a new simplified and highly sensitive reagent for measuring urinary luteinizing hormone was developed by means of a hLH monoclonal antibody marked with colloidal gold as a color indicator. It allows to detect hLH semi-quantitatively as a red spot on a plate within a few minute by two manuplations; mixing reagent and sample urine and then dropping the solution on a plate.

Sensitivity of the method was 10 IU/l of hLH and cross reactivity against hCG, hFSH and hTSH was more than 10 IU/l, 500 IU/l and 50 IU/l respectively. Reactivity was stable against pH change and also chemical components in urine.

Clinical evalution of the test revealed that specificity and sensitivity was very good than any other methods available. The method is characterized by its simplicity and especially acculacy, hence allow to predict LH surge by patient herself in her home successfully.

474 Inhibition of sperm-zona pellucida tight binding by sperm-immobilizing antibodies (SI-Ab) as assessed by the hemizona assay (HZA).
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Serum samples from 23 infertile women with SI-Ab and 15 unexplained infertile women without SI-Ab were assessed their inhibitory effects on sperm-zona tight binding by the HZA. The motile sperm fraction was collected by swim-up method and adjusted to $2X10^6$/ml from donor samples of proven fertility. Twenty-five μl of inactivated serum from a patient or the control (puerperium woman) was added to 225 μl of the motile sperm fraction and incubated for one hour. Human oocytes were cut in almost in half using micromanipulators mounted on a phase contrast microscope. One hemizona was placed in 100μl drop of swim-up sperm with patient's serum, while the matching hemizona was added in a drop of control sperm. Then the number of sperm tightly bound to the outer hemizona surface was counted. Most of the serum samples with SI-Ab showed remarkable inhibitory effects on sperm-zona binding, while none of those without SI-Ab exhibited same effects. Some of the serum samples with SI-Ab also inhibited sperm penetration into zona-free hamster oocytes. These results indicate some of the women who possess SI-Ab in their sera also produce antibodies which block fertilization.