We report our preliminary results of 42 testicular biopsies retrieved from a group of patients with secretory problems.

Materials and methods: Ovarian stimulation was induced using the long protocol. An open testicular biopsy was performed on the day of oocyte retrieval. Testicular tissues were dissected before determining the presence of spermatozoa, or spermatids in cases of total absence of the former. The suspension was loaded on Percoll gradients and centrifuged for 20–30 min at 600 *g*. Spermatozoa and spermatids (round, elongating and elongated) were isolated in the 90 and 70% Percoll gradients respectively. Injection of the spermatids was performed using a pipette with an inner diameter of 6–7 μm.

Outcome of sperm injection versus spermatid injection in patients with non-obstructive azoospermia

	Sperm injection	Spermatid injection
No. of cycles	34	8
No. of 2PN per injected oocytes (%)	224 (77)	19 (38)
No. of cycles with fertilization	33	8
No. of grade A and B embryos (%)	103 (46)	16 (84)
No. of pregnancies per cycle (%)	14 (41)	2 (25)
No. of ongoing pregnancy (%)	9 (26)	1 (12.5)[a]

[a]Pregnancy after the injection of an elongating spermatid.

Conclusions: Application of the ICSI–TESE procedure is useful for non-obstructive azoospermic patients. In cases where no spermatozoa could be found, we used spermatid injection rather than cancelling the cycle. From our initial experiences it appears that the injection of spermatids can induce fertilization, embryo development and ongoing pregnancy. Nevertheless, at present the accurate recognition of round spermatids in pathological cases remains an important issue.

17.30–17.45

O-225. Early cleavage of in-vitro fertilized human embryos to the 2-cell stage: a novel indicator of embryo quality and viability

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Introduction: A number of non-invasive methods have been proposed to evaluate embryo viability in human IVF programmes. In addition to biochemical analyses, a common method for the selection of embryos prior to transfer involves the assessment of embryo quality and morphology. We propose a new method to evaluate embryo viability based on the timing of the first cell division.

Materials and methods: Fertilized embryos that had cleaved to the 2-cell stage 25 h post-insemination were designated 'early cleavage' embryos, while the others that had not yet reached the 2-cell stage were designated 'no early cleavage' embryos. In all cases the early cleavage embryos were transferred when available.

Results: Early cleavage was observed in 27 (18.9%) of the 143 cycles assessed. There were significantly (χ^2 = 5.2; P = 0.02) more pregnancies in the early cleavage group [11/27 (40.7%)] compared with the no early cleavage group [21/116 (15.1%)]. The chances of achieving a pregnancy increased with the increasing number of early cleavage embryos observed per patient. In effect, patients with two or more early cleaving embryos had three times the pregnancy rate compared with those with no early cleavage embryos. No difference was found when comparing key parameters (age, stimulation protocol and semen characteristics) of couples belonging to both groups, indicating an intrinsic property or factor(s) within the early cleaving embryos.

Conclusion: The cause of early cleavage in embryos is not obvious, but indications exist to suggest that it could be an intrinsic factor within the oocyte or embryo. An inherent genetic control of such early cleavage could be postulated. We propose 'early cleavage' to be a simple and effective non-invasive method for the selection and evaluation of embryos prior to transfer because it provides a strong prognostic indication of the likelihood of pregnancy.

17.45–18.00

O-226. Survival of spermatozoa in hydrosalpinx fluid is not impaired

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Introduction: Several investigators have shown the detrimental effect of the presence (sonographically) of hydrosalpinges on the outcome of IVF. Recent reports have demonstrated the toxic effects of hydrosalpinx fluid on the in-vitro development of mouse embryos. The sperm survival test is well established for demonstrating toxic effects of compounds. We carried out this test on three samples of fluid from laparoscopically aspirated hydrosalpinges.

Materials and methods: Three specimens of hydrosalpinx fluid were centrifuged for 15 min at 700 *g* and the cell-free supernatant was used immediately. Spermatozoa from proven fertile men were used, and survival was evaluated after 1 and 18 h. Semen samples were processed using Percoll gradients of 40 and 90%. As a control fluid, 1% HSA in Earle's culture medium was used.

Results: In all three samples of hydrosalpinx fluid the survival of the spermatozoa was good and even better than the control.