

TP21

MURAL GRANULOSA CELLS (AS OPPOSED TO CULULUS OOPHORUS) MAY PRODUCE A FACTOR INHIBITING OOCYTE FERTILIZATION AND EARLY EMBRYO DEVELOPMENT IN HUMAN

F. Khamsi^{1,2}, Y. Yavas¹, S. Roberge¹, I.C. Lacanna¹, J.C. Wong^{1,3}, M. Endman¹

¹Toronto Fertility Sterility Institute; ²Division of Endocrinology and Metabolism, Toronto General Hospital, University Health Network; ³Department of Medicine, University of Toronto, Toronto, Ontario, Canada; ⁴Department of Obstetrics and Gynecology, University of Toronto; ⁵Sunnybrook Health Science Centre, Toronto, Ontario, Canada.

There has been reports in experimental and farm animals as well as human that coculturing embryos with cumulus type of granulosa cells or mural type may improve embryo development. Therefore, we have embarked on a series of studies in human in vitro fertilization to test this beneficial effect. Oocyte cumulus complexes were cocultured with a small (6×10^6) or large (18×10^6) number of mural granulosa cells. No beneficial effect on fertilization or development to 2-4 cell embryo was noted with coculturing with small number of mural granulosa cells. Unexpectedly, we observed a statistically significant detrimental effect on fertilization and 2-4 cell stage development with a large amount of mural granulosa cells added. In a second study, coculturing of oocyte cumulus complexes individually or in groups of four in a very small volume of fluid (25 μ l) showed no change in fertilization and 2-4 cell stage embryo development. It was of note that similar numbers of cumulus cell type of granulosa cells had no detrimental effect whereas mural granulosa cells showed a detrimental effect. This may be an indication the mural granulosa cells produce a paracrine / endocrine substance that may be inhibitory to oocyte function.

TP22

LONG TERM EFFECTS OF THE NO SCALPEL VASECTOMY

L. Shuba and J. Grantmyre
Department of Urology, Dalhousie University

Background: Vasectomy has recently surpassed tubal ligation as the most popular form of permanent contraception. The *no scalpel* vasectomy was first described in 1974 and has been popularized by reports of a lower risk of postoperative complications and is now the preferred method of vasectomy. Little is known about long term complications of this technique. Chronic testicular pain is an uncommon, but recognized, complication of traditional *scalpel* vasectomy. Published incidence rates vary between 0-70%. There are no reports in the literature on the incidence of this complication in patients following *no scalpel* vasectomy. This retrospective study was designed to assess the incidence of chronic testicular pain in patients who underwent *no scalpel* vasectomy two to four years ago.

Methods: The survey of 278 patients was conducted by a postal questionnaire. The 12 question evaluation was designed to evaluate post-operative complications and specifically pain or sexual dysfunction which occurred after or persisted at least one month following *no scalpel* vasectomy. Questionnaires were sent to patients who underwent the surgery between January 1995 and December 1997. The incidence of chronic testicular pain in these patients is compared to historical published reports of complications following traditional *scalpel* vasectomy.

Results: 90 patient returned completed questionnaires. Several patients mentioned early complications consisting of 4 who had pain lasting for 3 weeks after the procedure, one had swelling that lasted 6 weeks, another had blood in the semen and one failure. 26 patients had some pain after one month but only 9 patients of 90 responders reported significant discomfort in the penis or testicles after at least one month following *no scalpel* vasectomy. 17 patients had occasional pain that was considered 'less than a nuisance'. Of those with any pain, 7 had complete spontaneous resolution and 12 continue to have pain. 2 patients complained about frequent discomfort during the intercourse but 11 have occasional painful intercourse and 2 patients reported problems with their erections.

Interpretation: *No scalpel* vasectomy is a relatively new technique. One of its major advantages is a significantly lower rate of short-term complications. However, the results of our survey indicate that the incidence of chronic testicular pain following *no scalpel* vasectomy is similar to that following a traditional *scalpel* vasectomy. Patients should be informed about the risks of mild and occasionally bothersome chronic testicular pain following either *scalpel* or *no scalpel* vasectomy.