The repeatable method of laparoscopic ovum pick-up (OPU) in sheep: clinical aspects and efficiency of the method

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Abstract

The aim of the study was to develop new laparoscopic technique for repeated recovery of sheep oocytes. Oocytes were aspirated with specifically designed catheter. It allowed to recover oocytes without ovary damage and to preserve very good quality of recovered oocytes. Fifteen ewes were oocytes donors. Oocytes were collected: one time (group I, n=15), two times (group II, n=15), three times (group III, n=10), four times (group IV, n=5). The endoscope was inserted into the abdominal cavity. Two trockars for putting the manipulators were inserted 15 cm cranial from the udder. Oocytes were collected by aspiration of the follicular fluid from the ovarian follicles. The observed clinical complications were: ovary bleeding and cicatrix at place of needle insertion, the fragmentary adhesion of infundibulum and ovary, adhesions of omentum and peritoneum near the place where the grasping forceps were inserted and adhesion of ovary and uterus. Ovarian follicles (n=204) were aspirated, 130 (63.8%) oocytes were obtained. Out of 130 obtained oocytes, 112 were qualified for in vitro maturation. The remaining 18 oocytes (13.8%) were rejected due to cytoplasmic changes. The proposed technique allows for the collecting oocytes of good quality that can be used for IMV/IVF techniques and cloning.

Key words: ovum pick-up, sheep, laparoscopy, oocytes