This research was designed to determine the elimination period of viable sperm in dog's ejaculate after orchiectomy. Seven mature dogs provided by Curitiba's Municipal Kennel were used in the study. Semen was collected by manual massage of the penis without the presence of an estrual bitch. Initially the semen was collected 3 times a week for 2 weeks in order to get the dogs adapted to the collection procedure. After that, each dog was castrated. Castration was performed using an accepted orchiectomy technique under general anesthesia using intravenous injection of ketamine after sedation with acepromazine and local anesthesia with lidocaine 2%. Semen was collected 3 times a week for 2 weeks to establish normal post-castration semen parameters. Each semen sample collected was analyzed for progressive motility, volume, concentration, total cell number and morphologic characteristics. Progressive motility was estimated by placing a drop of raw semen on a slide at 37ºC, placing a coverslip over the sample and observing at x400 magnification. Concentration was determined by diluting the semen 1:200 in 10% formol solution and placing the diluted sample on a Toma Nova chamber. Both chambers were counted and averaged. Morphology of 100 cells was evaluated after staining the cells with Cerovsky stain. Changes in all parameters were compared from before castration to after castration. There was a significant decrement in the output sperm in 2 dogs, 3 days after castration, and in 5 dogs, 7 days after the surgery. There were no significant differences in progressive motility, volume and morphology.

**Keyrds:** dog; orchiectomy; fertility.