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| University of Baghdad | | | | |
| University of Baghdad | | | | College Name |
| Surgery And Obstetrics | | | | Department |
| Wafer Mahdi Saleh | | | | Full Name as written in Passport |
| Wafer\_saleh@yahoo.com | | | | e-mail |
| **Professor** | **Assistant Professor** | **Lecturer** | **Assistant Lecturer** | Career |
| PhD | | Master | |  |
| Embryo transfer Experiments in cattle | | | | Thesis Title |
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| Embryo Transfer Technique became of the most current tools in  Improving animal production. It has been utilized in many countries around the world. This technique however ,can be used  To accomplish highly producing stocks in a short period of time  And to reduce the cost of genetic improvement over generation by  Utilizing the genetic material. In addition, its use and application on a large scale has a very economical potential. For these reasons  And because there are no previous studies on the subject in Iraq ,  This study was undertaken to seek ways of application of this technology under Iraqi circumstances.  The study included Estrus synchronization technique in recipient and donor cows by using PGF2 α analogue (cloprostenol & loprosteol). Synchronization was achieved by double injections technique at (11) days intervals using 500 mcg cloprostenol or 15mg loprosteol in each cow. Estrus synchronization was also achieved by a single injection technique using the same products, and depending on the presence of mature Corpus Luteum. Double injection technique was easy to apply in large number of cows, while single injection was only practical in small number of cows.  Superovulated donors during estrus synchronization showed signs of estrus at 24 hours before the recipient . Accordingly , Superovulated cows were injected with PGF2 α analogue one day after injecting the recipient to achieve full synchrony.  Induction of superovulation was accomplished by using PMSG or FSH at days 10 of the cycle. PMSG was used in doses of 2500, 3500 and 4500 IU as a single intramuscular injection, while FSH was used an intramuscular injection by two schedules. The first schedule included twice daily injections of 5mg FSH at 12 hours interval for four days. The second schedule consisted of an intramuscular injection of FSH in decreasing doses twice daily (5, 4,3,2 and 1mg)given at 12 hours intervals for five days. Optimal superovulation was induced by 3500IU of PMSG or by the decreasing doses of FSH.  Embryos were collected by three non-surgical techniques. These techniques were the open, semi- closed and closed methods.  Semi-closed method was superior in collecting embryos than other methods.  The collected embryos were transferred surgically to 14 synchronized recipients via flank region in standing position. The embryos were placed in the tip of the horn ipsilateral to the Corpus Luteum and the wound was closed.  Most the recipients did not come to heat within forty days after transfer and one recipient was confirmed to be pregnant at 45,60 and 90 days of pregnancy.  In conclusion ,this study indicate the possibility of using embryo transfer technique under Iraqi present circumstances and can be improved to be utilized under field conditions, provided that adequate facilities and tools are available for such project. | | | | Abstract |