Surgical Abortions in Cattle

by
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Termination of early pregnancy in mismated, valuable heifers and cows are often requested by purebred breeders. In performing an abortion by any of several commonly recognized procedures (i.e., estrogen injections, expression of the corpus luteum, etc.) one must consider some of the disadvantages of altered hormone balances and its sequelae, trauma to the ovary, excessive hemorrhage, and others. Because of these unwanted effects, many purebred breeders hesitate to have abortions performed thus resulting in a loss of valuable breeding time and immature heifers suffering the sequelae associated with difficult parturition.

Surgical abortion has met with excellent success in the treatment of mismated females. Records have indicated that when this surgery is utilized on females of approximately 40 days pregnancy, the average interval between abortion and settling is 43 days. As the length of pregnancy increased, the breeding interval increased, however, with the majority of abortions being performed in the first tri-mester, the interval was well within the normal interval observed in normal full-term parturitions.

Surgery is preferably performed on females which have been deprived of water and feed for 12 to 24 hours. Standing restraint is utilized and the left paralumbar area prepared for surgery. Sedation with a chloral hydrate-magnesium sulfate solution intravenously may be indicated in hypersensitive subjects. Desensitization of the proposed incision site is accomplished by a regional or segmental lumbar nerve block. Aseptic technique is utilized. A vertical skin incision adequate for the introduction of the surgeon's arm is made in the paralumbar fossa area just ventral to the 3rd and 4th transverse lumbar processes (Fig. 1). Fibers of the abdominal musculature are separated to expose the peritoneum which is then incised. The surgeon's hand is introduced into the peritoneal cavity and the uterine horns palpated. In most instances the pregnant uterine horn–including the embryo or fetus–may be grasped and drawn into the abdominal incision (Fig. 3). Occasionally the use of a Knowle's Uterine Forceps is indicated. The forceps is applied to the pregnant horn caudal to the position of the embryo or fetus and is useful in stabilizing the organ and for the application of gentle traction. Care should be exercised in its use so as to avoid tearing or extensively crushing the tissue.

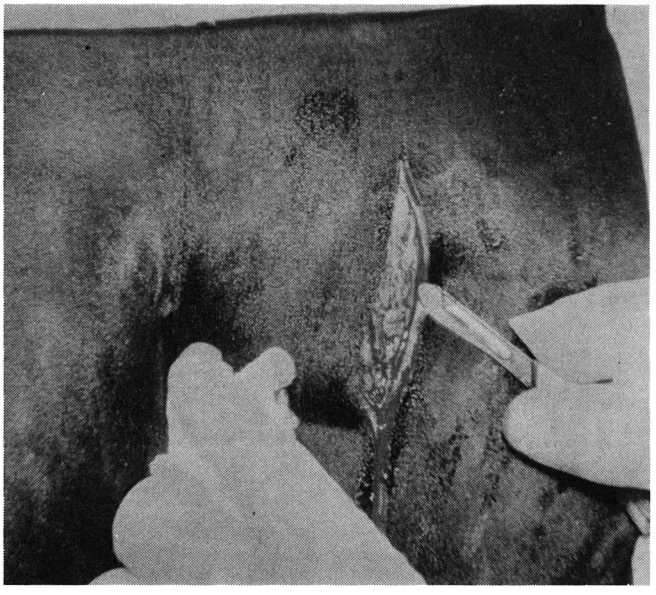

Fig. 1. A view of the left paralumbar vertical skin incision.

A longitudinal incision is made on the greater curvature of the pregnant horn immediately over the embryo or fetus. With pressure on the deeper aspects of the uterine horn, the embryo or fetus is expressed (Fig. 4). Fetal membranes are often removed intact with the embryo. If attached, they are severed at the uterine incision line and the remaining placental membranes are left in the uterine horn. Antibiotics are infused into the uterine horn via the incision. In

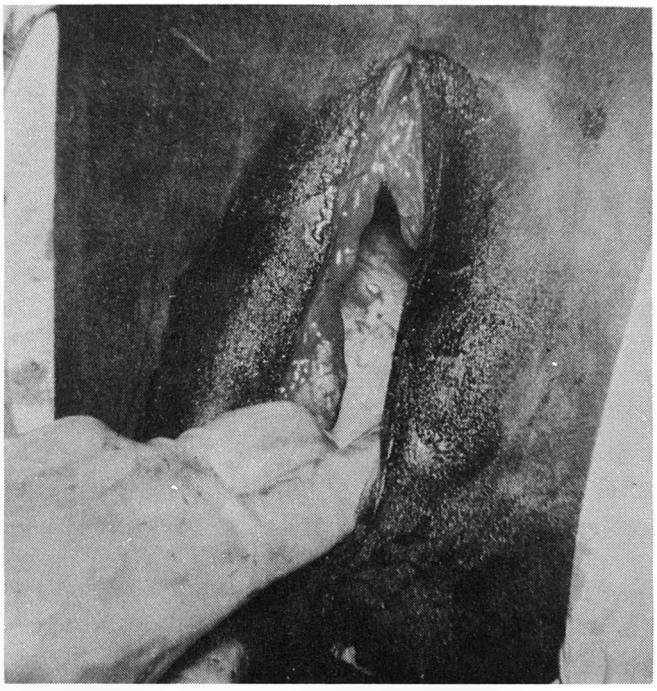

Fig. 2. A view of the exposed peritoneal cavity and dorsal caudal aspect of the rumen.

rare instances the uterus is sutured. Uterine incisions in pregnancies of 120 days have been left unsutured with excellent results. Gross examination of previously incised uterine horns indicate that scar tissue and adhesions are directly related to suturing and the use of instruments in stabilizing the uterus.

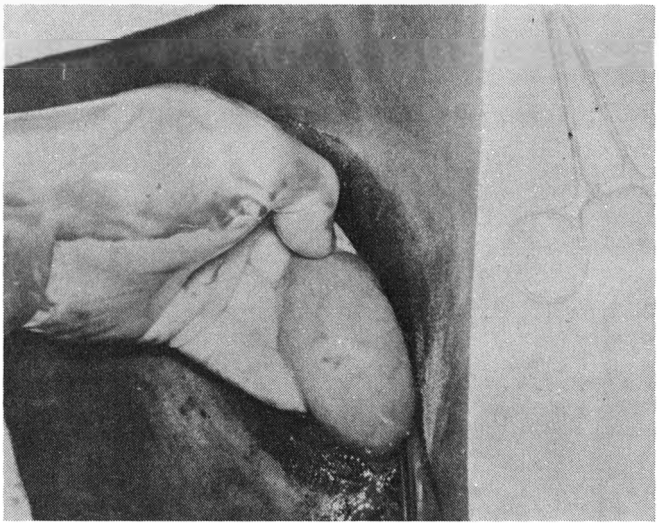

Fig. 3. A view of exposed section of pregnant uterine horn including embryo.

A variation of the procedure has been utilized in those cases where the uterine horn is not long enough to be exposed in the abdominal incision. In those cases, a No. 22 Bard-Parker Blade was carried into the peritoneal cavity, protected by the forefinger and thumb of the surgeon, and

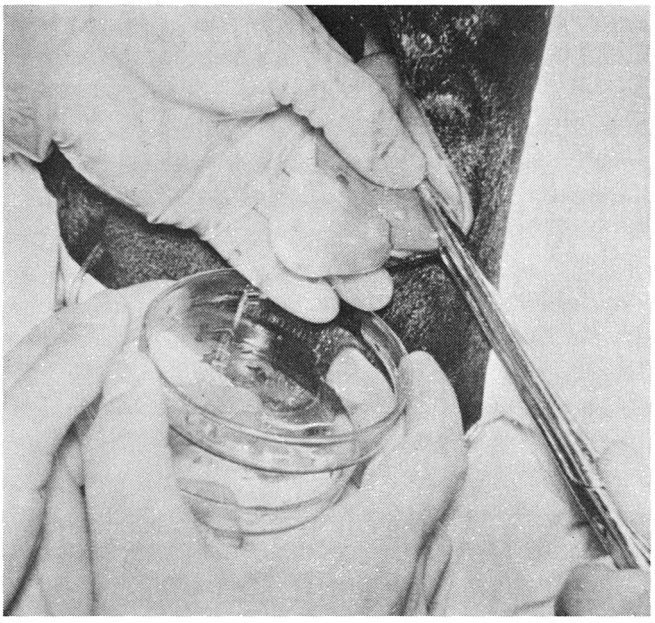

Fig. 4. Uterine incision on greater curvature; embryo and fetal membranes being expressed. Note position of Knowle's Uterine Forceps.

an incision made blindly over the greater curvature of the uterine horn and embryo or fetus. The embryo or fetus was then expressed from the uterine horn into the palm of the surgeon's hand and delivered through the abdominal incision. Such cases are usually encountered in early pregnancy and at the stage where placental membranes can be easily removed by traction.

Intraperitoneal medication with an antibiotic is desirable. This is accomplished through the incision and prior to suturing.

Since the abdominal muscle fibers are not cut, the incision may be closed with a minimum of suturing. Medium No. 2 chromic catgut is utilized. A one-layer closure involving the abdominal muscles and the peritoneum is usually adequate. The skin is sutured with a synthetic suture material in an interlocking suture pattern.

Systemic antibiotics may be administered for several days; however, infection is rare and recovery is usually uncomplicated.

Skin sutures are removed in approximately 7-10 days.

When placental membranes are left in the uterus, they are usually sloughed via the vagina within the first week following surgery. However, one cow which had surgery at 120 days of pregnancy carried the placental membranes for an additional 73 days after which they were sloughed without apparent ill effect on the general health of the cow. Noteworthy in this case was the lack of visible necrosis or putrefaction of the membranes.

Results to date on approximately 100 cases document the procedure as safe and effective.