

.21 mg on day 3 (five ewes/day) to 4.97 ± 1.20 mg on day 9 of an estrous cycle and remained at that level until day 14. Amount of protein recovered on day 14 of pregnancy did not differ from that on day 14 of an estrous cycle (6.61 ± 0.76 vs 5.1 ± 1.60 mg). Up to 35 bands were detected after isoelectric focusing of protein collected on day 14 of an estrous cycle; only two faint bands (pI 7.2 to 7.6) were not present also in blood serum. With the exception of the two bands between pH 7.2 and 7.6, protein collected on days 3 and 9 of an estrous cycle focused a similar number of bands. During pregnancy, uterine protein differed from that collected during an estrous cycle as follows: 1) after day 14, a pregnancy-specific protein migrated toward the cathode at pH 4.5; 2) after day 13 of pregnancy, increased staining intensity occurred for a protein of ≈ 9500 MW; and 3) proportions of proteins focused between pH 5.4 and 7.0 decreased on day 14 of pregnancy. Compared to blood serum, uterine protein collected from ovariectomized ewes in experiment III (five ewes/treatment) had a higher proportion of proteins focused at less than pH 4.7. After 10 days of progesterone replacement, the proportion of proteins focused at less than pH 4.7 decreased while recoverable protein increased (1.20 ± 0.26 vs 3.48 ± 1.20 mg). Twenty-one protein bands were detected after progesterone treatment and only one of these (pI 7.9) was not present also in serum. Estradiol replacement increased recoverable uterine protein (4.98 ± 2.37 mg) but profiles of protein collected after estrogen treatment were not different from those observed in control ovariectomized ewes. Progesterone plus estradiol increased the proportion of proteins focused between pH 4.7 and 5.8. The present study demonstrates that the majority of proteins in uterine luminal fluid are present also in blood serum and progesterone is the major steroid influencing the presence of proteins in uterine fluid of ewes.

451. Calcium Chloride, Practical Necrotising Agent. L. M. Koger, D.V.M. College of Veterinary Medicine, Washington State University, Pullman, WA 99163.

Accidental perivascular deposits of solutions of CaCl_2 injected intravenously for the treatment of hypocalcemia are known to produce discrete areas of dry gangrene. Ischemic necrosis with minor inflammatory changes appears to be the pathogenesis; both cells and nuclei are shrunken but remarkably intact. Experimental injections revealed practical applications; e.g. destruction of superficial hyperplasia and neoplasia (warts, sarcoids and encapsulated tumors, particularly if pedunculated) with rapid healing and epithelization. Young calves were dehorned by injections of 0.5-1.5 mls. Castration of calves, dogs, kids, lambs and pigs by intratesticular injections was a simple procedure with less pain than surgically done. Depending on testicular size, amounts of 0.1-10.0 mls. were distributed throughout the testicle. Resulting orchitis subsided in 3-6 days, followed by sclerosis and atrophy, leaving a cord-like remnant in 60-90 days. Small gauge needles (20-26 ga.) of sufficient length to distribute the solutions were used. If an excess was injected, or if leakage out of the tunica albuginea occurred, hypostatic dry gangrene of the scrotum was followed by sloughing and uneventful healing. No septicemia or myiasis were observed. Various solutions of CaCl_2 have been tested, ranging from 12-75% weight/volume. Aqueous solutions permit higher concentrations but tinctures of 25-30 Gms. CaCl_2 q.s. 100 mls. of 80-99% ethanol have definite advantage of less pain, less peripheral inflammatory reaction, and more consistent results. These procedures avoid open surgery with its limitations and problems.

452. Susceptibility of the Pig Corpus Luteum to $\text{PGF}_{2\alpha}$ at Various Stages of Pregnancy. Robert R. Kraeling* and George B. Rampacek, USDA, ARS and University of Georgia, Athens.

Pregnant crossbred gilts were randomly assigned to 1 of 12 treatments to study the susceptibility of the CL to the luteolytic action of $\text{PGF}_{2\alpha}$ at various stages of pregnancy. Groups 1 through 6 were injected with 10 mg of $\text{PGF}_{2\alpha}$ free acid and groups 7 through 12 were injected with saline on day 10, 30, 50, 70, 90 or 110 of pregnancy, respectively. The number of gilts in each group were: (1) 4, (2) 3, (3) 3, (4) 4, (5) 3, (6) 3, (7) 3, (8) 3, (9) 3, (10) 3, (11) 1, and (12) 2. Blood samples were taken via anterior vena cava puncture on the day of and 1, 2, 6, and 12 days after injection and were assayed for progesterone (P) by RIA. None of the gilts in groups 6 through 11 aborted, but the 2 gilts in group 12 farrowed on day 114 and 115. Plasma P levels were similar in all gilts of groups 6 through 11 during the sampling period (10 to 24 ng/ml), whereas P levels of the 2 gilts of group 12 declined from 13 to less than 1 ng/ml by day 6 after saline injection. Within 30 hours after $\text{PGF}_{2\alpha}$ injection, groups 2, 4, and 5 aborted and within 48 hours after $\text{PGF}_{2\alpha}$, group 6 farrowed, while pregnancy continued in groups 1 and 3. P levels of group 1 remained stable during the