

1941

Abstracts

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Recommended Citation

(1941) "Abstracts," *Iowa State University Veterinarian*: Vol. 3 : Iss. 2 , Article 19.

Available at: https://lib.dr.iastate.edu/iowastate_veterinarian/vol3/iss2/19

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ABSTRACTS



A HAIRLESS CALF. An unusual congenital deformity was observed in a Friesian bull calf. He was out of a Friesian cow, whose two previous calves were normal. When seen this calf was three weeks old, and except for a few eye lashes was completely hairless. The skin itself was correctly pigmented, but was so thin that veins and muscle groups were visibly prominent, and any slight abrasion caused a wound. The head was small and pig-mouthed and the forelimbs stag-kneed.

The testicles were under-developed to such an extent that they were palpated with difficulty. In spite of the fact the calf was sucking well and otherwise in good condition, the owner refused to try any treatment and it was slaughtered.

(Owen, D. W. 1940. *Unusual deformity in a calf.* *Vet. Rec.* 52:759)

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A NEW DEAL IN SUTURES. The author first states his requirements of suture materials. They are: (1) Approximation of tissues in the desired position until they have united. (2) Suture that is not irritating to the tissue. (3) Material that will not introduce infection. It is believed that a fine non-absorbable suture, with a tensile strength superior to an absorbable suture of even greater diameter, would be of value.

In comparing present suture materials it is noted that catgut is irritating and that chromicized catgut is less irritating. Silk is less irritating than any of the catguts and has a greater tensile strength,

but the interstices of the fibers tend to become filled with fluids and later infiltrated with cells. If the silk is treated to prevent this, it is difficult to handle and loses its elasticity.

The Nylon suture material the author worked with was from No. 000 to No. 2, twisted or braided, and from No. 000 to No. 2 in the monolithic strand. The latter was not very flexible and produced excessive injury when the large loop over the eye of the needle was passed through tissue; the monolithic strand also tended to cut through delicate tissue. The twisted strand was more flexible and of greater tensile strength than silk suture of equal size. The ends do not fray, snag nor twist into knots when wet; its elasticity prevents breakage and prevents knots from slipping.

The author explains his experiments on the dog with Nylon and silk suture material. In his summary and conclusions he states the following:

1. Monolithic Nylon sutures cause less irritation to, and are less affected by fascia and muscle than twisted Nylon or silk, but it is difficult to handle. The knots are bulky and hard to encapsulate.

2. Multifilament Nylon, especially No. 000, is flexible, easily handled, and does not cut tissues. It is more elastic than silk and causes less irritation in muscle or fascia.

3. In intestinal anastomosis and gastrotomy, No. 000 Nylon caused little irritation and showed good retentive ability.

4. After attachment of the bladder and terminal colon to the abdominal wall with Nylon, it was concluded that the

material did not tend to produce fistulous tracts.

5. Bladder tears sutured with No. 000 Nylon held securely and did not result in fistulous tracts.

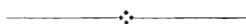
6. Nerve and tendon tolerate Nylon well with no leucocytic or lymphocytic response.

7. In infected wounds, Nylon's advantage over silk is the earlier change from a leucocytic to lymphocytic cellular response.

8. Nylon may be repeatedly sterilized with no loss of tensile strength.

9. Nylon has all the good qualities of silk and in addition is stronger, less irritating and does not allow for as marked invasion of its interstices as silk.

(Aries, L. J. 1941. *Experimental studies with synthetic fiber (Nylon) as a buried suture. Surgery* 9:51-60).



ANOTHER HOST. The virus of equine encephalomyelitis was isolated from a collection of *Triatoma sanguisuga* (Le Conte) obtained from a pasture near Garrison, Kansas, in June, 1940. This insect is commonly known as the "assassin bug", and is common throughout Kansas and much of the region where equine encephalomyelitis has occurred. It is a blood-sucking insect known to feed on horses. Several collections were made and the virus was isolated from bugs collected from pastures from which several clinical cases of the disease occurred in 1939.

Studies conducted indicated that the virus is identical with the Western strain of the equine encephalomyelitis virus. Following the preparation of a bacteria-free filtrate of the live insects, intracranial inoculations of 300 gram guinea pigs were made. Close observations of the inoculated pigs were made to determine any reactions to the material injected. Six serial pig inoculations were made before the typing studies were begun. The virus was found to be of low virulence which increased with subsequent passage through susceptible guinea pigs. The

virulence increased from 50 percent mortality in six days to 100 percent mortality in guinea pigs in four days. Also following intranasal and foot pad inoculation, the virus proved fatal.

Tabulation of the typing studies and the manifestation of characteristic symptoms lead to the belief that the virus isolated was identical with that of equine encephalomyelitis. Grinding of the teeth, creeping paralysis, and swimming motions of the front limbs were found to be characteristic symptoms of guinea pigs following footpad inoculation.

Two strains of the virus of equine encephalomyelitis are generally recognized in the United States. In order to determine the actual strain of the virus with which they were dealing, a series of guinea pigs that were solidly immune to the Eastern strain were inoculated and proved to be 100 percent susceptible. Whereas, guinea pigs that were solidly immune to the Western strain were also immune to the strain of the virus. Other cross-immunity studies in which the virus was propagated on chick embryos and injected into guinea pigs immune to the two strains of the virus proved that the virus was of the Western strain.

Histological findings of the brains of guinea pigs that died following the inoculation with the virus were almost identical with those found in typical cases of the Western strain of equine encephalomyelitis. Together with the cross-immunization and typing studies, the investigators felt certain that they were dealing with the Western strain of equine encephalomyelitis.

Triatoma sanguisuga (Le Conte) is of the family Reduviidae. It is closely related to the so-called "kissing bug". This species is tropical and sub-tropical in distribution, but its range extends northward throughout the Great Plains area.

All stages of the insect live in rodent burrows and nests. Around Manhattan they have been most readily found in the burrows of wild rodents, and under stony ledges on hill sides. They feed largely on the blood of vertebrates, and have also

(Continued on page 97)

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Following Dr. Thorp's talk, the usual business was presented and nominees for offices in the Jr. A.V.M.A. selected.

Feb. 19, 1941

Kent Magruder provided the entertainment.

Dr. C. H. Covault presented a paper on "Some Present Day Problems in Clinical Diagnosis."

Following his talk Dr. Covault presented Howard Beardmore, the past President, and Al Tietze, the new President of the Jr. A.V.M.A., with gold gavels in behalf of the society.

Election of officers was held and the following men were chosen: Ed Hanna, President elect; Ray Helvig, Vice President; Joe Graham, Secretary; George Lightcap, Critic; and John Deaver, Sargent at Arms. The newly elected officers were then installed by Pres. Beardmore and the gavel passed on to Al Tietze. After a brief acceptance speech, Pres. Tietze requested a motion for adjournment.

ENCEPHALITIS HOST—

(Continued from page 91)

been reported as attacking other insects. They overwinter as half-grown nymphs to adults. The immature forms become adult from early May to August. Eggs are deposited from June to September. There is only one generation a year.

The "assassin bug" is nocturnal in habits, feeding and flying about chiefly at night. They are attracted to lights during mid-summer evenings and frequently enter homes, seeking especially bed rooms and basements. Persons are sometimes bitten by them.

(— 1940. A new vector of equine encephalitis virus. 97:438-439 Jour. Amer. Vet. Med. Assoc.)

The value of phenothiazine as a dusting powder to eliminate louse infections on chickens has been successfully demonstrated by recent tests conducted by Henry E. Parish of the U. S. Dep't of Agriculture.