

NEUROTHERAPY OF INFERTILITY IN COWS CAUSED BY SICKNESS OF THE UTERINE ADNEXA

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(Received, 12 January 1993)

Chronic adnexitis is often a result of dystocia, uterine traumas and retention of the foetal membranes; it has a long duration and is difficult to diagnose because of its subclinical form — unless adhesions of the ovaries, cornua and peritoneum develop; it produces longlasting sterility manifested in constant abortions.

During the period 1989-1991 we applied neurotherapy (pharmacoacupuncture) with paracervical injections of Impletol to 208 infertile cows, raised on dairy farms in Vojvodina and Kosovo & Metohia. The cause of infertility was chronic adnexitis in subclinical or clinical form, as diagnosed by subsequent rectovaginal examinations and anamnesis (para and perimetritis), utero-peritoneal adhesions paracervical abscesses, constantly repeated oestruses. The cows were infertile for 120-265 days after the last calving, of which most were difficult and complicated accompanied by fetal membrane retention, puerperal infections and intoxications, purulent endometritis or paracervical abscesses. Most of them had been unsuccessfully treated for long periods by intrauterine infusions of Lotagen and Lugol, accompanied by parenteral application of antibiotics, Catosal, vitamins AD3E, prostaglandin preparations PGF2 α , GmRh hormones etc. The average milk yield on the examined farms was from 4500 to 7000 liters per year and the cows were of the Holstein-Friesian, black and white or Simmental breed. After the therapy 97 (46,63 %) cows became pregnant, calving normally.

Neurotherapy (pharmacoacupuncture) was applied immediately after establishing correct diagnoses, using para cervical injections of Impletol and was repeated after 15 days. Paracervical injections of Impletol have a dual effect: neurotherapy and pharmacoacupuncture. Impletol consists of 40 ml of 5% procaine hydrochloride and 3 ml of 50% coffeine sodium benzoate with redistilled water made up to the volume of 100 ml. Impletol was applied using a 50 cm long needle, 3-5 cm deep, just beside the on both sides.

The favourable effects of Impletol therapy recommend it for wider use in chronic adnexitis patients.

Key words: Sterility neurotherapy, pharmacoacupuncture, reconception pregnancy

INTRODUCTION

In 1987, we described the method of neurotherapy for sterility, when 19 (42,00%) out of the total of 43 infertile cows suffering from chronic adnexitis were successfully cured (Miljković, et al 1978, 1981). It was emphasized that neurotherapy consists of paracervical injections of Impletol (5% procaine hydrochloride, 50 % coffeine sodium benzoate and aqua redest) which acts as a neurotherapeutic combined with the needle puncture in cases of bovine chronic adnexitis (para — and perimetritis, cervicitis and paracervicitis). Chronic adnexitis usually occurs in cows after difficult calvings, trauma of the uterus, and placental retention; it is longlasting and clinical diagnosis (subclinical form) is not easy unless adhesions of the uterine horns and ovary with the peritoneum occur (clinical form). It causes sterility of long duration, expressed through reoccurring oestrus. Purebred, high yielding dairy cows usually suffer from this kind of sterility.

Past experience in the healing of chronic adnexitis is not encouraging, especially since a large number of stricken cattle must be excluded from breeding regardless of their inherited genetic characteristics (Marković 1991.). Medical treatment was tried by administering multiple doses of wide-range antibiotics (Arthur 1964.) or "liqueuld medical therapy" — infusion of disinfectants into the utenis (Roberts 1986.) or by combining these methods. Some dozen years ago treatment with prostaglandins and GnRH was accepted (Korenić 1980.). However, until the arrival of neurotherapy this from of sterility was among the largest dairy farm problems. Kothbauer (1987.) advanced this method of tradirional Chinese acupuncture combined with the healing properties of modern neurotherapy (Impletol), opening a wide range of new possibilities for curing the ailment. In our area this treatment was accepted, either independently or combined with other therapies (Miljković and al. year), and represented an important step forward in the control of dairy cattle sterility.

Infertile cows, although genetically very valuable, were not able to become pregnant despite multiple repetitions of classic therapy and insemination because of chronic adnexitis, which disabled both motori and secretory uterine functions. Cell membrane function in sick uterine adnexal tissue was abnormal because of depolarisation which prevented iritation and reaction of the cell and decreased neurovegetative functions. Paracervical neuromedicament (Impletol) injection halts the depolarization, reinstating normal cell electopotential in the sick adnexal tissue, and normal cell reactions return. The needle's strike and application of the neuromedicament which penetrates asnexal tissue, enables quick reestablishment of motor and secretory uterine function, allowing conception and pregnancy after insemination.

When the efficient medicative action of neurotherapy (pharmacoacupuncture) through paracervical injections of Impletol, is tested on a large number

of infertile cows, the described method may be recommended for wide use in veterinary practice for the treatment of bovine infertility caused by chronic adnexitis.

This time, we report our experience in the treatment of sterility with Impletol paracervical injections of a much larger number of cattle on farms in Vojvodina and Kosovo & Metohija.

MATERIALS AND METHODS

Impletol (neurotherapeutic) was prepared fresh by mixing 40 ml of 5% Procaine hydrochloride, 3 ml of 50 % Caffeine sodium benzoate and redistilled water up to 100 ml. It was kept in sterile 100 ml flasks.

For paracervical applications of Impletol we used a 50 cm long injection needle and a 30 ml syringe. The long sterilized needle, protected with a plastic tube, was introduced by hand through the vagina near the uterine mouth and vagina folds, and carefully stuck 3-5 cm deep through vaginal wall just near the cervix, paracervically, at 1 cm from portio vaginalis uteri, both on the left and right side, slowly injecting 20 ml of Impletol (Figure 1.). This way we obtained the effect of the needle (acupuncture) and storage of Impletol in both sides of the cervix and ligamenta lata uteri (pharmacoacupuncture).

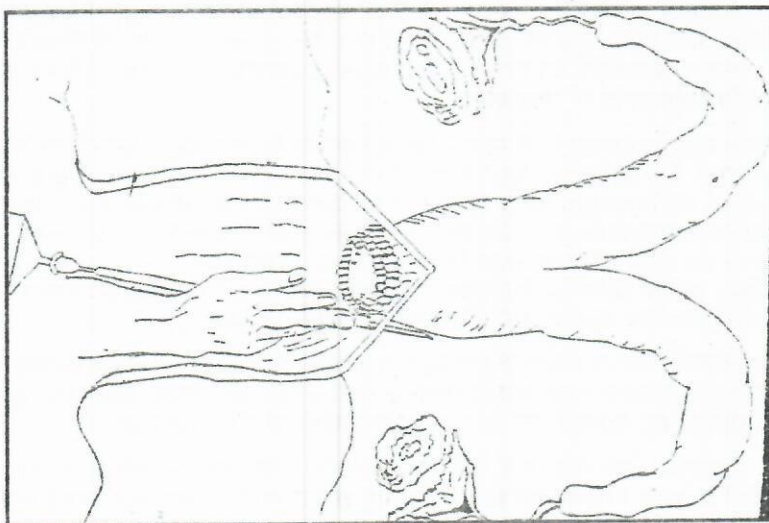


Figure 1. Application of paracervical injections. The point to be punctured with the needle

After therapy with paracervical injections, the cows were inseminated at the next oestrus (spontaneous or induced), if oestral discharge was normal. After treatment the cows were checked for conception, oestrus and pregnancy

for 45 days. We estimated the effect of neurotherapy and pharmacopuncture through the number of diagnosed pregnancies.

From 1989. to 1991. we treated 208 infertile cows with the clinical diagnosis of adnexitis chronica on several farms (Vojvodina and Kosovo & Metohija) with pure bred, high yielding, dairy cows, using paracervical injections of Impletol. The cows were infertile for 120-265 days after the last parturition which was mostly diagnosed as partus gravis, accomanied by foetal membrane retention, puerperal infections, endometritis or paracervical abscesses. Most of them had been unsuccessfully treated by intrauterine infusions of Lotagen or Lugol, for a long time and parenteral applications of antibiotics, Catosal, vitamins AD3E, prostaglandins, GnRH, etc. During oestrus without clinically visible changes, the cows had been inseminated several times without success, coming in to oestrus again and some of them were excluded from further reproduction as permanently infertile. Considering that those cows were foundation stock, very productive, and genetically valuable, we decided to try curing them by neurotherapy as described above.

During rectovaginal examinations of such "problematic" cows we were usually able to diagnose an enlarged uterus with purulent discharge pachytene cervix, paracervical absccses, adhesive peri and parametritis, pachyten ligamenta lata uteri and large follicular cysts on the ovaries. However, almost in same frequency there were no pathomorphological changes on the genital organs of the infertile cows, although anamnestic data mentioned puerperal disturbances and frequent return to heat. Based on repeated rectovaginal examinations and anamnestic data it was concluded that the main cause of their longterm infertility was Adnexitis chronica, the true indication for neurotherapy, with paracervical injectons of Impletol.

These sterile cows had been raised on self-menaged farms in Vojvodina and Kosovo & Metohija using tethered or untethered systems. They were fed by the usual technology with grass and corn silage, alfalfa hay, sugar-beet slices and concentrates with added minerals and vitamins. The avarage yield of the cows on these farms was from 4500 to 7200 l of milk per year and they were of diary cattle breeds (Holstein Friesian, black and white, Eastern Friesian, black and domestic spotted of Simmental type (Table 1.)

The infertile cows were given paracervical injections of Impletol immediately after the diagnosis was established, and after 15 days, depending on the clinical findings as described at the beginning of this section.

1-2 minutes are needed for the treatmen of both cervical sides. Before treatment, it is very important to clean the vulva and its environment with warm water and disinfect it with alcohol. If there is a dirty or purulent secretion present in the vagina, the same must be flushed with disinfectant solution.

After therapy with paracervical injections, the cows were inseminated during the next oestrus, spontaneous or induced with prostaglandin preparations followe by sub oestral therapy with antibiotics. If the oestral uterine discharge was not normal and clean, the cows were not inseminated but

intrauterine infusions of Lugol or Lotagen were administered and they were inseminated later in the next oestrus.

Table 1. Data on the cows treated by paracervical injections of Impletol for Adnexitis chronica and the outcome.

Treated cows no.	Cured and pregn. no. (%)	Retur. in heat	Sterility duration in days	Breed	Average milk prod. per year	Locality of farms
93	44 (47,31)	49	150–240	Holstein Freiesian black	4400–7200	Vojvodina IPP Banat, Kikinda, Irmovo, PP Krivaja
36	13 (36,11)	23	120–365	HF black	5500–6500	Čelarevo podunavlje
33	17 (51,51)	16	120–150	HF black	5500–6500	Čenej 25 may
14	6 (42,86)	8	120–180	HF black + domestic colored	4500	Lovćenac AIP Njegoš
32	17 (53,12)	15	120–365	Eastern friesian + domestic spotted	4200	Kosovo and Metohija Dubrava Istok
208	97 (46,63)					

Treated cows were checked after insemination for pregnancy or heat on the 20th and 40th day, and those which did not show heat were palpated for pregnancy determination on the 60th day. Detection of pregnancy was the measure of a cure by the described method.

RESULTS AND DISCUSSION

Table 1. Shows that the pregnancy rate of cows inseminated immediately after treatment with paracervical injections of Impletol was 36,11% — 53,12%. Certain differences in the proportion of cured cows (pregnancy) probably were conditioned by the different degree of sickness and alteration of uterine adnexa, individual immune resistance, manner of feeding, care and housing etc. Out of the total number of 208 infertile cows suffering from chronic adnexitis, 97 (46,63%) were cured and after the first insemination became pregnant, and calved later delivering normal, healthy calves. The effect of treatment obtained may be considered as very good, with regard to chronic adnexitis frequently with pathomorphological changes (uterine horns) and ligament adhesions, para and perimetritis and paracevicitis which causes longterm and even continuous sterility. In this work, cows which had been infertile for 4–12 months were cured, after unsuccessful treatment by classic therapy for sterility (intrauterine infusions, hormones, antibiotics, minerals and vitamins) before the paracervical injections.

These infertile cows had not been able to conceive despite repeated classic therapy and double inseminations because of chronic adnexitis which disabled motoric and secretory uterine functions.

In the diseased tissue of uterine adnexes, because of depolarization, the function of cellular membranes is not possible and irritation and reaction of the cells is absent, so neurovegetative functions decrease and stop. Paracervical injections of the neuromedicament Impletol, renew normal cell electropotential in the sick adnexal tissue, the depolarization ceases and normal, reaction of the cells occurs. The precise point to be punctured by the needle and injected with neurotherapeutic is of definite importance. On the one hand the needle puncture acts irritatively as an acupuncture and on the other there is storage of medicament (a neurotherapeutic which gradually spreads in the diseased tissue and uterine adnexes and acts as an antiphlogistic. This reestablishes quickly the motoric and secretory function of the uterus, so that the animal can conceive again after insemination.

This paracervical injections with this neurotherapeutic agent show a double effect: neurotherapy and acupuncture (pharmacoacupuncture).

Because of the efficient remedial role of neurotherapy with paracervical injections of Impletol tested on a large number of cows we recommend this method for wide spread use in curing sterility caused by chronic adnexitis.

Acknowledgments

The authors are grateful for the support and help in the publishing of this work of Academician prof. Antonije Školjev dr. sci. and Negoslav P. Ostojić Mr. sci., Executive Director European Center for Peace and Development in Belgrade, Yugoslavia.

This work was financially supported by the "Zajednica nauke Srbije"

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NEUROTHERAPIJA JALOVOSTI KRAVA UZROKOVANE OBOLJENJIMA MATERIČNIH ADNEKSA

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SADRŽAJ

Hronični adneksitis nastaje često u krava posle teškog telenje, trauma uterusa i retencija sekundina, traje dugo, klinički se teško dijagnostikuje (subklinička forma) osim ako nastaju adhezije materičnih rogova i jajnika sa peritoneumom (klinički oblik) i izaziva dugotrajni sterilitet koji se ispoljava stalnim povadanjem. Od ovog oblika steriliteta oboljevaju uglavnom rasne visoko mlečne krave.

U periodu 1989-1991 godine primenili smo metod neuroterapije (framakoakupunkture) sa paracervikalnim injekcijama Impletola na Kosovu i Metohiji. Uzrok jalovosti krava bio je hronični adneksitis u subkliničkoj formi, dijagnostikovao na osnovu ponovljenih retkovainalnih pregleda i anamneze (para i perimetritis, adhezije uterusa sa peritoneumom, paracervikalni apscesi, stalna povadanja). Krave su bile jalove 120-265 dana posle zadnjeg telenja, koje je većinom bilo teško i komplikovano, praćeno zadržavanjem posteljice, puerperalnom infekcijom i intoksikacijom, gnojnim endometritisom ili paracervikalnim apscesima. Većina od njih bila je duže vreme bezuspešno lečena intra uterinim infuzijama Lotagena ili Lugola uz parenteralno davanje antibiotika, Catosala, vitamina AD2E, protaglandinskih preparata PGF2a, gonadorilizing hormona i drugo. Prosečna mlečnost krava na farmama lečenih krava kretala se od 4500 do 7200 l mleka godišnje i iste su pripadale Holštajn-Frizijskoj crno belo i Simentalskoj rasi goveda. Po završenoj teritoriji 97 (46,63%) je zatridnelo, i normalno se otelilo.

Neuroterapiju (farmakoakupunkтуру) jalovih krava proveli smo paracervikalnim injekcijama Impletola odmah posle postavljanja dijagnoze i ponavljali je za 15 dana. Paracervikalne injekcije pomenutog neuroterapeutika imaju dvostruko delovanje: neuroterapiju i framakoakupunkтуру. Impletol se sastoji od 40 ml 5% procain hydrochloridi i 3 ml 50% coffeini natrii benzoici i do 100 ml aquae redestilatae. Impletol je aplikovan kravama paracervikalno po 30 ml pomoću dugačke injekcione igle dužine 50 cm koju smo zabadali pored samog cerviksa 3-5 cm duboko sa obe strane cerviksa levo i desno.

Zbog efikasnog lekovitog dejstva neuroterapije paracevikalnim injekcijama Impletola proverenog na velikom broju krava, preporučujemo ovaj metod za široku praksu lečenja steriliteta uzrokovanog hroničnim adneksitisom.