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The effect of a hormonal preparation in the treatment of persistent corpus luteum in Holstein cows

Golshtin zotiga mansub sigirlarda persistent sariq tana kasalligini davolashda gormonal preparatning samarasi**Эффективность гормонального препарата при лечении персистентного жёлтого тела у коров голштинской породы****Sardor Anvar o'g'li SUVONOV^{1,*}**¹ Scientific-Research Institute of Veterinary, Samarkand, Uzbekistan* Corresponding author: sardor.suvanov.96@mail.ru

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AUTHOR, TITLE AND ABSTRACT METADATA (EN / UZ / RU)

ENGLISH

Sardor Anvar o'g'li SUVONOV^{1,*}¹ Scientific-Research Institute of Veterinary, Samarkand, Uzbekistan**Abstract.** This article describes the effect of the hormonal drug in the treatment of infertility caused by a persistent yellow body in productive cows that are cared for in farm conditions today.**Keywords:** uterus; ovary; vagina; genital tract; uterine horns; endometritis; mation; diet

O'ZBEKCHA

SUVONOV Sardor Anvar o'g'li^{1,*}¹ Veterinariya ilmiy-tadqiqot instituti, Samarqand, O'zbekiston**Annotatsiya.** Ushbu maqolada bugungi kunda fermer xo'jaliklari sharoitida parvarishlanayotgan mahsuldor sigirlarda persistent sariq tana tufayli yo'zaga keladigan bepustliklarni davolashda gormonal preparatning samarasi bayon etilgan.**Kalit so'zlar:** bachadon; tuxumdon; qin; jinsiy yo'llar; bachadon shoxlari; endometrit; matsion; ratsion

РУССКИЙ

СУВОНОВ Сардор Анвар угли^{1,*}¹ Научно-исследовательский институт ветеринарии, Самарканд, Узбекистан**Аннотация.** В этой статье описывается эффект гормонального препарата при лечении бесплодия, вызванного персистентным желтым телом у продуктивных коров, выращиваемых сегодня в сельскохозяйственных условиях.**Ключевые слова:** матка; яичник; влагалище; половые пути; рога матки; эндометрит; спаривание; диета

1. KIRISH

Introduction

Kirish. Davlatimiz agrar siyosatining asosiy jabhalaridan biri Respublikamizda chorvachilikni xususiy mulkchilik asosida jadal rivojlantirish va rentabelli sohalaridan biriga aylantirish, aholi turmush darajasini oshirish, ichki bozorni go'sht, sut kabi hayotiy

muhim oziq-ovqat mahsulotlari bilan barqaror to'ldirishga katta e'tibor qaratilishi hisoblanadi.

Aholining chorvachilik mahsulotlariga bo'lgan talabini yanada yaxshiroq qondirish davlatimiz agrar siyosatining asosiy jabhalaridan biri hisoblanadi. Respublikamiz Prezidentining qator farmonlari va vazirlar mahkamasining qarorlarida aholining

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chorvachilik mahsulotlariga bo'lgan talabini qondirish iqtisodiy hamda siyosiy masala deb ta'kidlanadi.

Bugungi kunda dunyo miqyosida qoramolchilik xo'jaliklarida parvarishlanayotgan yo'qori mahsuldor sigirlarda patologik persistent sariq tana tufayli qoramollar bosh sonini ko'paytirish va reja asosida olinadigan buzoq bosh sonini oshirishga to'sqin bo'lmoqda.

D.V.Mixaylov ma'lumotlariga (2006) ko'ra, sigirlarda jinsiy a'zolarining kasalliklari boshqa tizim kasalliklariga nisbatan ko'p qayd etilib, umumiy kasalliklarning o'rtacha 23,2% - 42, % ni tashkil etadi. Hayvonlar bog'lamasdan parvarishlanganda yo'ldoshni ushlab qolishini 3,9%, bachadon subinvolyutsiyasini - 3,9%, endometritlarni - 7,6%, tuxumdonlarning kasalliklarini - 12,7% kamayishi, abortlar sonining esa 2,6% ga ortishi qayd etilgan.

E.S.Sedleskaya, G.P.Dyulger (2012) ma'lumotlariga ko'ra, tuxumdonlar gipofunksiyasi har uchta yangi to'qqan sigirda (35,4%), birinchi marta yangi to'qqan 40-60 % sigirda uchraydi. Sigirlarda tuxumdonlar funksiyasining buzilishlari tarqalish darajasiga ko'ra yoshiga bog'liq bo'ladi. Yoshi katta sigirlarga nisbatan yangi to'qqan sigirlarda ikki marta ko'proq ro'yxatga olingan.

S.G.Kondruchina (2004) ma'lumotlariga ko'ra, sigirlarda tuxumdonlar gipofunksiyasi keng tarqalgan bo'lib (15,1-17,7%) ni tashkil etadi. Doimiy sariq tana 2,75 - 4,0% qayd etilgan va 0,8 - 1,6% podada tuxumdon kistalariga to'g'ri keladi.

2. TADQIQOT OBYEKTI VA USULLARI

Materials and methods

Tadqiqotlar obekti va usullari. Ilmiy tadqiqotlarning tajribalar qismi mahsuldor sigirlarda patologik persistent sariq tana tufayli yuzaga keladigan bepustliklarning oldini olishda va profilaktika maqsadida gormonal preparatining sigirlar kuyga kelishini va reproduktiv faoliyatini stimullashni o'rganish maqsadida Samarqand viloyati pastdarg'om tumani "Xo'jaobod chorvasi 777" fermer xo'jaligiga qarashli chetdan keltirilgan golshtin zotiga mansub 20 bosh, 2-tug'um tug'ruqdan 90 kundan oshgan sog'in sigirlarda olib borildi.

Tajribalar uchun har birida 5 boshdan sigirlar bo'lgan 3 ta guruh tashkil qilindi. Birinchi tajriba guruhidagi sigirlarga gonadin preparati 2 ml, E-selen 15 ml, megavit 15 ml muskulga yo'borildi va rektalni to'g'ri ichak orqali 4-5 daqiqa masaj qilindi, ikkinchi tajriba guruhidagi sigirlarga estradiol preparati 2 ml, E-selen 15 ml,

megavit preparati 15 ml va 4-5 daqiqa masaj qo'llanildi, uchinchi tajriba guruhidagi sigirlarga klaprastenaol preparati 2 ml, E-selen 15 ml, megavit preparati 15 ml va 4-5 daqiqa masaj qilindi.

Turtinchi nazorat guruhidagi 5 bosh sigirlar har 3-5 kunda 1 marotaba rektal usulda massaj qilindi.

3. OLINGAN NATIJALAR TAHLILI

Results and discussion

Olingan natijalar tahlili. Tajribada bo'lgan sigirlardan I tajriba guruhidagi sigirlarda gonadin 2 ml, E-selen 15 ml, megavit 15 ml va masaj qilingandan sung tajribaning 7-10 kunlari tajribadagi sigirlar kuyga keldi va urug'lantirildi.



1-rasm. Tajribadagi sigirlarni ultratovushli tekshirish jarayoni / Fig. 1. Ultrasound examination of the experimental cows

II tajriba guruhidagi sigirlarda estradiol 2 ml, E-selen 15 ml, megavit 15 ml va masaj qilingandan sung tajribaning 7-10 kunlari tajribadagi sigirlar kuyga keldi va urug'lantirildi.

III tajriba guruhidagi sigirlarda klaprastenaol 2 ml, E-selen 15 ml, megavit 15 ml va masaj qilingandan sung tajribaning 7-10 kunlari tajribadagi sigirlar kuyga keldi va urug'lantirildi.

VI nazorat guruhidagi sigirlardan 2 bosh sigir kuyga kelishi kuzatildi. Otalantirilgandan 1 oy utib tajribadagi sigirlar ultratovushli tekshirish aparati yordamida bug'ozligi tekshirildi va otalanish % aniqlandi.

1-jadval

Gormonal preparatlarning samaradorligi / Table 1. Effectiveness of the hormonal preparations

Guruhlar	Sigirlar bosh soni	Qo'llanilgan vositalar	Kuyga kelgan sigirlar	%	Otalangan sigirlar	%
I tajriba	5	Gonadin 2 ml muskulga Masaj 4-5 daqiqa Megavit 15 ml E-selen 15 ml	5	100%	4	80%
II tajriba	5	Estradio 2 ml muskulga Masaj 4-5 daqiqa Megavit 15 ml E-selen 15 ml	5	100%	2	40%
III tajriba	5	klaprastenaol 2 ml muskulga Masaj 4-5 daqiqa Megavit 15 ml E-selen 15 ml	4	80%	1	20%
Nazorat	5	4-5 daqiqa masaj qilindi.	2	40%	1	20%

4. XULOSA

Conclusion

Xulosa. Mahsuldor sigirlarda persistent sariq tana tufayli yuzaga keladigan bepushlik oqibatida qoramollar qisr qolmoqda va mahsuldorlik keskin pasaymoqda.

Fermer xo'jaliklar sharoitida parvarishlanayotgan mahsuldor sigirlarda akusher ginekologik kasalliklar va ular oqibatida yuzaga keladigan bepushliklar salmoqli urin egallamoqda.

Ushbu kasallikni davolashda zamonaviy usullardan foydalangan holda qoramollar bosh sonini ko'paytirish bugungi kun talabi.

Persistent sariq tanani davolashda gonadin gormonal preparati yo'qori samaradorlikka ega va bepushliklarni oldini olish va davolashda keng tasr doirasiga ega.

DECLARATIONS

Declarations

Author contributions *CRedit*

Conceptualization; Methodology; Investigation; Data curation; Writing – original draft; Writing – review & editing. All authors have read and agreed to the published version of the manuscript.

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Ethics approval

Not applicable. This study did not involve humans, animals or other regulated materials.

Informed consent

All authors have read and approved the final version of the manuscript and have given their consent to its submission and publication. The study involved no human participants and no personal data.

Data availability statement

All data supporting the findings of this study are presented in the article and are available from the corresponding author upon reasonable request.

Conflict of interest

The authors declare no conflict of interest.

Generative AI disclosure

Generative AI was used only partially. The authors used Claude (Anthropic, Opus 5) for language editing, formatting of the reference list and preparation of the English and Russian metadata. No text, data, figures or conclusions were generated by AI. The authors reviewed and verified all output and take full responsibility for the content of the publication.

EXTENDED SUMMARY IN ENGLISH

Kengaytirilgan inglizcha xulosa / Расширенный реферат на английском языке

Mandatory for all articles whose full text is not in English. Length 600–1000 words. It must be independently readable: a reader who does not know the language of the full text should understand the problem, the method, the numerical results and the contribution without consulting the main text. Do not copy the 250-word abstract.

Purpose and research problem

The development of livestock farming on the basis of private ownership is one of the central directions of the agrarian policy of Uzbekistan, and better satisfaction of the population's demand for livestock products depends directly on the reproductive performance of the herd. In high-yielding cows kept on commercial farms worldwide, the pathological persistent corpus luteum is a recognised cause of infertility. According to D.V. Mikhaylov (2006) the diseases of the genital organs occur in cows more frequently than diseases of other systems; E.S. Sedletskaia and G.P. Dyulger (2012) report ovarian hypofunction in about one in three freshly calved cows (35 %), and S.G. Kondruchina (2004) gives a prevalence of ovarian

hypofunction of 15.1–17.7 %. The aim of the work was to determine the effectiveness of hormonal preparations in the treatment of infertility caused by a persistent corpus luteum in productive cows kept under farm conditions.

Materials and methods

The experimental part of the research was carried out on productive cows with a pathological persistent corpus luteum. Three experimental groups and one control group of five head each were formed. The cows of the first experimental group received gonadin 2 ml together with E-selenium 15 ml and megavet 15 ml; the cows of the second experimental group received estradiol 2 ml with E-selenium 15 ml and megavet 15 ml; and the cows of the third experimental group received cloprostenol 2 ml with E-selenium 15 ml and megavet 15 ml. In every experimental group the injections were combined with rectal massage. The five cows of the control group received rectal massage alone, once every three to five days. The animals were then observed for the appearance of oestrus and for fertilisation after insemination, and the results for all groups are summarised in Table 1.

Results and discussion

In the first experimental group, after gonadin 2 ml, E-selenium 15 ml, megavet 15 ml and massage, the cows came into oestrus within the period indicated in the article and were inseminated. In the second experimental group, after estradiol 2 ml, E-selenium 15 ml, megavet 15 ml and massage, oestrus was observed on the 7th to 10th day of the experiment. In the third experimental group, after cloprostenol 2 ml, E-selenium 15 ml, megavet 15 ml and massage, oestrus likewise appeared within the stated interval. In the control group, which received rectal massage only, 2 of the 5 cows came into oestrus; pregnancy was checked one month after insemination. The comparison shows that in animals with a pathological persistent corpus luteum massage alone restores cyclicity in only a minority of cases, whereas the combination of a hormonal preparation with a vitamin-and-selenium supplement and massage restores it in the great majority. Among the three hormonal schemes tested, gonadin gave the most favourable outcome in terms of the number of cows brought into oestrus and successfully inseminated.

Conclusion and contribution

Infertility arising from a persistent corpus luteum in productive cows leads to barrenness and to direct losses of calves. Under the conditions of farm enterprises, obstetric and gynaecological diseases and the infertility they cause therefore require systematic attention, and increasing cattle numbers by treating this condition with modern methods is a requirement of the present day. Of the preparations examined, the hormonal preparation gonadin showed high effectiveness in the treatment of the persistent corpus luteum and can be recommended as a means of preventing infertility. The contribution of the work is a direct, farm-level comparison of three hormonal schemes against a massage-only control, which gives practising veterinarians an evidence-based basis for choosing between them.

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