Proceeding
International Symposium in Veterinary Science 2018

Strengthening the Regional Veterinary Education and Research for the Future Excellent Veterinary Graduates

February, 28th 2018
Faculty of Veterinary Medicine, Universitas Gadjah Mada
PROCEEDING
INTERNATIONAL SYMPOSIUM IN VETERINARY SCIENCE
Strengthening the Regional Veterinary Education and Research for the Future Excellent Veterinary Graduates

REVIEWERS:
Prof. Hiroshi Sato (Yamaguchi University, Japan)
Prof. Byeong Chun Lee (Seoul National University, South Korea)
Prof. Koichi Sato (Yamaguchi University, Japan)
Prof. Drh. Srihadi Agungpriyono, Ph.D, PAVet(K) (Institut Pertanian Bogor)
Prof., Dr. drh., Pudji Sriananto, M.Kes. (Universitas Airlangga, Surabaya)
Dr. drh. I Nengah Kerta Besung, M.Si. (Universitas Udayana, Bali)
Prof. Dr. drh. Siti Isrina Oktavia Salasia (Universitas Gadjah Mada, Yogyakarta)
Dr. drh. Rini Widayanti, MP. (Universitas Gadjah Mada, Yogyakarta)
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Cover design:
Drh. Dito Anggoro, MSc.

Publisher and Editorial Board:
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http://fkh.ugm.ac.id
Greetings From The Dean

Assalamu’alaikum warohmatullahi wabarokatuh.
Good Morning.

I take this opportunity to welcome our honorable:
Rector of Universitas Gadjah Mada (Prof. Ir. Panut Mulyono, M.Eng. D.Eng)
Vice President of Foreign Affairs, Yamaguchi University (Prof. Fusanori Miura)
I would love to welcome our distinguished keynote speakers:
Dean of The United Graduate School of Veterinary Medicine, Yamaguchi University
Dean of The United Graduate School of Kagoshima University
Dean of The United Graduate School of Tottori University
Prof. Byeong Chun Lee, College of Veterinary Medicine, Seoul National University
Head of Indonesian Association Faculty of Veterinary Medicine
All Deans of Faculty Veterinary Medicines in Indonesia as well as dear participants.

Distinguished delegates, Ladies, and Gentlemen,

Faculty of Veterinary Medicine, Gadjah Mada University is proud to become the host of the 2nd International Symposium in Veterinary Sciences. This symposium is an annual meeting that initiated, firstly, in Bogor in 2017 by a group of veterinary faculty representatives from Indonesia and Japan as initiators. The theme of this symposium is "Strengthening the regional veterinary education and research for the future excellent veterinary graduates".

As the Dean of Veterinary School, Universitas Gadjah Mada and on behalf of the Organizing Committee, I am very pleased indeed to welcome all of you to Yogyakarta. For years, Yogyakarta has experienced being a student and cultural-rich city leading to the destination for higher-learning study from all over the country and as the second tourist destination in Indonesia, as well as being endowed with handful of beauty and a wide range of cultures. In addition, the city is generally safe to visit, therefore I do hope you may have some other chance to visit Borobudur and Prambanan temples, a part of the world heritages as awarded by UNESCO. This seminar will allow you the opportunity to experience some of its richness.

In this symposium we invite deans and faculty members from 15 universities as follows: Yamaguchi University, Kagoshima University, Tottori University, Seoul National University, Gadjah Mada University, Bogor Agricultural University, Syah Kuala University, Airlangga University, Udayana University, Hasanuddin University, Nusa Cendana University, Brawijaya University, Wijaya Kusuma University, Nusa Tenggara Barat University and Padjajaran University.

Recent advances in veterinary research and education would be discussed in this symposium. Every faculty representative would present their leading activities in research and its contribution to educational improvements in term of standardization system. During
the discussion, we could do an institutional capacity mapping as a fundamental base for future collaborative works and synergies.

Last but not least, the role of these networks will not be maximized if they are not accompanied by strong mutual commitments from each institution. With this, it is hope every individual will enable to contribute actively and progressively with good outcomes for strengthening the veterinary education and research for the future excellent veterinary graduates.

We sincerely hope that from this symposium will give a positive impact for every institution. We also hope to develop more mutual collaboration in the future. Thank you, have a nice and fruitful discussion and God Bless You.

Wassalamu'alaikum warahmatullahi wabarakatuh

Dean of Faculty of Veterinary Medicine UGM

Prof. Dr. Siti Isrina Oktavia Salasia, DVM
Schedule at Glance

International Symposium in Veterinary Science: Strengthening the regional veterinary education and research for the future excellent veterinary graduates

Faculty of Veterinary Medicine, Gadjah Mada University, February 27th- 28th, 2018

Tuesday, February 27, 2018

Yogyakarta City Tour Part I

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<tr>
<td>07.30</td>
<td>Pick up Participants in Adi Sucipto Yogyakarta Airport</td>
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</tr>
<tr>
<td>09.40</td>
<td>Go to Hotel (Novotel)</td>
<td><img src="image1.jpg" alt="Novotel Yogyakarta" /></td>
</tr>
<tr>
<td>11.30</td>
<td>Pick up Participants in Adi Sucipto Yogyakarta Airport to Hotel</td>
<td><img src="image2.jpg" alt="Pick up Participants" /></td>
</tr>
<tr>
<td>12.30</td>
<td>Pick up in Hotel for Lunch Time and Tour “CUPU WATU RESTO”</td>
<td><img src="image3.jpg" alt="Cupu Watu Resto" /></td>
</tr>
<tr>
<td>14.00</td>
<td>Go to Hindu Temples Prambanan</td>
<td><img src="image4.jpg" alt="Hindu Temples Prambanan" /></td>
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<tr>
<td>Time</td>
<td>Activity</td>
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<tr>
<td>16.00</td>
<td>Boko Temples: Sunset view</td>
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<tr>
<td>18.00</td>
<td>Go to Abhayagiri Restaurant: Dinner</td>
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<tr>
<td>20.00</td>
<td>Back to Hotel</td>
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# DAY 2, February 28 2018

**International Symposium in Veterinary Science: Strengthening the regional veterinary education and research for the future excellent veterinary graduates**

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<th>Speaker</th>
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<td>Registration</td>
<td></td>
<td>Auditorium 3rd Floor</td>
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<tr>
<td>09.30-10.00</td>
<td>Opening Ceremony</td>
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<td></td>
<td><strong>Welcome Address:</strong></td>
<td><strong>Dean of Faculty of Veterinary Medicine, Gadjah Mada University</strong></td>
<td>Auditorium 3rd Floor</td>
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<tr>
<td></td>
<td><strong>Speaker:</strong> Prof. Siti Isrina Oktavia Salasia</td>
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<tr>
<td></td>
<td><strong>Opening Address:</strong></td>
<td><strong>Vice President of Foreign Affairs, Yamaguchi University</strong></td>
<td>Auditorium 3rd Floor</td>
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<tr>
<td></td>
<td><strong>Speaker:</strong> Prof. Fusanori Miura</td>
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<td></td>
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<tr>
<td></td>
<td><strong>Opening Address:</strong></td>
<td><strong>Rector of Gadjah Mada University</strong></td>
<td>Auditorium 3rd Floor</td>
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<tr>
<td></td>
<td><strong>Speaker:</strong> Prof. Panut Mulyono</td>
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<tr>
<td>10.00-10.30</td>
<td>Group photos &amp; AM Coffee Break</td>
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<td></td>
<td><strong>Oral Session (1):</strong></td>
<td><strong>Chairperson: Agung Budiyanto, DVM., Ph.D. (Vice Dean of Academic and Students Affairs)</strong></td>
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<tr>
<td>10.30-10.50</td>
<td>Research and Study at FVM of Yamaguchi University</td>
<td><strong>Dean of The United Graduate School of Veterinary Medicine, Yamaguchi University</strong></td>
<td>Auditorium 3rd Floor</td>
</tr>
<tr>
<td>10.50-11.10</td>
<td>Research and Study at FVM of Kagoshima University</td>
<td><strong>Representative of FVM of Kagoshima University</strong></td>
<td>Auditorium 3rd Floor</td>
</tr>
<tr>
<td>11.10-11.30</td>
<td>Research and Study at FVM of Tottori University</td>
<td><strong>Representative of FVM of Tottori University</strong></td>
<td>Auditorium 3rd Floor</td>
</tr>
<tr>
<td>11.30-12.00</td>
<td>Research and Study at FVM of Indonesia</td>
<td><strong>Head of Indonesian FVM Association</strong></td>
<td>Auditorium 3rd Floor</td>
</tr>
<tr>
<td>12.00-12.30</td>
<td>Research and Study at College of Veterinary Medicine, Seoul National University</td>
<td><strong>Prof. Byeong Chun Lee</strong></td>
<td>Auditorium 3rd Floor</td>
</tr>
<tr>
<td>12.30-13.00</td>
<td>Discussion</td>
<td>All of the attendee</td>
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<td>13.00-14.00</td>
<td>Coffee Break</td>
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<td>14.00-15.00</td>
<td>Poster Session</td>
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<td>Oral session (2)</td>
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<td>Oral session (3)</td>
<td><strong>Participants</strong></td>
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<td>15.00-15.30</td>
<td>Coffee Break</td>
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<tr>
<td>Time</td>
<td>Activity</td>
<td>Chairperson</td>
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<td>15.30-16.30</td>
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<td>Veterinary Teaching Hospital</td>
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<td>16.30-18.00</td>
<td>Back to the Hotel and Break</td>
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<td>18.00-21.00</td>
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*Note: Special events*

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<td>Prof. Koichi Sato</td>
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Participants:
Deans of FoVM Gadjah Mada University,
Agriculture Bogor University and Airlangga University.
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Abstract
Uterine infectious disease that occurs after partus on a cow is called metritis, or endometritis. Postpartum infections in dairy cows are common disease. The impact caused by metritis and endometritis is delayed of postpartum oestrus, high service per conception, and long calving interval. This disease causes economic losses for farmers. The purpose of this research is to determine the effective treatment methods of postpartum infections in dairy cows. 40 dairy cows 15 - 30 days postpartum, age 3 - 7 years devided into four groups, 10 cows in each group. First group was injected by prostaglandin 2α intramuscularly. Second group was injected by antibiotic (oxytetracycline LA) intramusculary. Third group was treated by intrauterine infusion using cephapirin. Fourth group was injected with prostaglandin 2α intramuscularly combined with intra uterine infusion using povidone iodine. Postpartum oestrus was used as the recovering indicator. The research data was analized descriptively. The healing rate after treated with prostaglandin 2α, antibiotic (Oxytetrasicline), cephapirin, and combination of povidone iodine and prostaglandin 2α was 87.5%, 50%, 90% and 70% respectively, and the rate time of post partum oestrus occurrence was 99 days, 83 days, 80 days and 78 days respectively.

Keywords: Metritis, Endometritis, postpartum oestrus, service per conception and calving interval

Introduction
Unpregnant cattle have a sterile uterus, which is useful for growth and development of the fetus. During pregnancy, the cervix is an intra uterine barrier that preventing invasion of microorganisms into the uterus for 9 months (Sheldon dan Dobbson, 2004). At partus phase, large amounts of bacteria enter the uterus through the open cervix, it cause infection of the uterine (endometritis) and infertility. Treatment for cattle with postpartum infections is so varied both in the use of antiseptics, hormonal, antibiotics and its combination. Therefore, this study will examine the methods of treatment of postpartum infections in dairy cow in order to find the best method.

Research Purposes
The purpose of the present research is to determine the most effective treatment methods of postpartum infections in dairy cows.
The results of the present research are to give an overview of the effective methods to treat the postpartum infections in dairy cattle. It can contribute to the local governments as a policy maker in attempt to treat, prevent, and control the postpartum infectious disorders optimally, and it will help farmer in preventing economic losses due to reproductive disorders.
Literature Review

Cervical metritis and / or endometritis is a common reproductive disease in post partum phase, caused by the invasion of pathogenic substances in the main period of post parturition, resulting uterine physiology disorder. Postpartus metritis and / or endometritis is one of the most important diseases on livestock (Bondurant, 1999; Foldi et al., 2006), it makes a high economic losses due to delaying the days open, lengthening the calving interval, and prolonged the involution process. The healing of endometritis is usually good, unless the inflammatory process becomes worse .The usual therapy is by injection of antibiotics, combination between antibiotics and hormones (Prostaglandin F-2 alpha), or by intra uterine antiseptics (Robert, 1986).

Materials And Methods

Materials

This research was conducted in Sleman, Yogyakarta Special Region (DIY) in post partum dairy cattle. The research used 40 cattle, which were 15 - 30 days post parturition, age 3 - 7 years, belong to dairy cattle group. Sleman Regency was chosen as a research location because it has a uniformity of dairy cow group.

Method

40 dairy cows were devided into four groups, 10 cows in each group. First group was injected by prostaglandin 2α intramuscularly. Second group was injected by antibiotic (oxytetracycline LA) intramusculary. Third group was treated by intrauterine infusion using cepapirin. Fourth group was injected with prostaglandin 2α intramuscularly combined with intra uterine infusion using povidone iodine. Postpartum oestrus was used as the recovering indicator. The research data was analized descriptively.

Results and Discussion

The results of the present research show that the healing rate after treated with prostaglandin 2α, antibiotic (Oxytetrascline), cepapirin, and combination of povidone iodine and prostaglandin 2α was 87.5%, 50%, 90% and 70% respectively (Table 1). Healing cows characterized by the appearance of oestrus.

Table 1. the Data of healing (estrus) and estrus post partum on dairy cow after treated with hormones, antibiotics, and combinations thereof.

<table>
<thead>
<tr>
<th>No.</th>
<th>Method of therapy</th>
<th>Number (cow)</th>
<th>Heal (%)</th>
<th>Oestrus post partum (day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PGF 2α INJECTION</td>
<td>8</td>
<td>7 (87.5%)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>ANTIBIOTIC INJECTION (oxytetracycline)</td>
<td>8</td>
<td>4 (50%)</td>
<td>83</td>
</tr>
<tr>
<td>3</td>
<td>INFUSI CEPHAPIRIN</td>
<td>10</td>
<td>9 (90%)</td>
<td>80</td>
</tr>
<tr>
<td>4</td>
<td>IODIN INFUSION &amp; PGF2α INJECTION</td>
<td>10</td>
<td>7 (70%)</td>
<td>78</td>
</tr>
</tbody>
</table>
The period of post partum oestrus occurrence in cows treated with prostaglandin 2α, antibiotic (Oxytetrasicline), meticure (cephapirin), and combination of povidone iodine and prostaglandin 2α was 99 days, 83 days, 80 days and 78 days respectively. In general, 50% of cows recover after one-time treatment. The highest cure rate was cephapirin treatment (90%) and the lowest was oxytetracycline treatment (50%).

Conclusion

The healing rate of cattle with endometritis problem after treated with prostaglandin 2α, antibiotic (Oxytetrasicline), cephapirin, and combination of povidone iodine and prostaglandin 2α was 87.5%, 50%, 90% and 70%, and the interval of post partum oestrus occurrence was 99 days, 83 days, 80 days and 78 days respectively.

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