20th International Pig Veterinary Society Congress

June 22-26
Durban
South Africa

We are delighted that the International Pig Veterinary Society Congress 2004, decided to select South Africa as the host country for the 20th IPVS Congress. The Pig Veterinarians of South Africa will ensure that this congress lives up to the best traditions of previous congresses; incorporating an interesting and topical scientific programme, fascinating accompanying persons tours and an excellent social programme, allowing delegates the opportunity to network with their overseas colleagues.

This, the first IPVS congress on the African continent, will undoubtedly be of enormous benefit in generating solutions to the emerging pig veterinary challenges, especially those related to exotic and changing viral diseases, decreased use of antimicrobials and nutritional advances. The congress is important to further pig veterinary science in South Africa, to encourage younger veterinarians to join the pig industry, as a vehicle to generate funds for research and to improve the pig industry in Southern Africa.

South Africa is a magnificent and beautiful country, and offers tourists value for money. Thus, pre and post congress tours will be a major attraction for delegates to come to South Africa. Durban, in KwaZulu Natal, is a vibrant multi-cultured city with magnificent beaches, easily accessible game parks, theme villages and a moderate winter climate making it an ideal tourist destination. We urge our colleagues throughout the world to use this opportunity to get a glimpse of the continent’s rich and fascinating wonders and to enjoy the hospitality of their African friends.

Dr Peter Evans
Chairman: Local Organising Committee: IPVS 2008
THE EFFICACY OF THIRD GENERATION CEPHALOSPORIN IN THE TREATMENT OF STREPTOCOCCAL DISEASES IN PIGS DEPENDING ON SEVERITY OF THE CLINICAL SIGNS

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Introduction

In the course of streptococcal diseases in pigs there are two, from clinical point of view, predominant types: neurological (cerebro-meningeal) (1) and joint infections ones (2). Neurological form manifests most commonly as meningitis. Joint infections of streptococcal diseases is marked by an occurrence of symptoms starting from mild lameness to arthritis with severe lesions which are generally chronic ones.

The aim of the field study was to evaluate the efficacy of the treatment of two diverse forms of Streptococci infections in pigs (neurological and joint infections) with third generation cephalosporin (ceftiofur, Naxcel (Pfizer)) depending on the severity of the clinical signs.

Materials and Methods

On two standard pig farms “P” and “W” weaners and growers with clinical evidence of streptococcal infections were used. The division into two groups was made: the group showing neurological (CNS) symptoms and the one presented with joint infections. Within both groups, the animals were divided in accordance with the severity of the clinical symptoms:

Neurological symptoms:
I. Apathy, auricular symptoms
II. Increase of body temperature above 41,0°C, in coordination
III. Lateral position, rowing movements

Articular symptoms:
IV. Lameness, lack of evident swelling or mild swelling of one joint
V. Lameness and evident swelling of one joint
VI. Severe lesions in several joints (polyarthritis)

The animals received ceftiofur at 5 mg/kg, which equals 1 ml of Naxcel per 20 kg. If one dose of the antibiotic didn’t produce an expected outcome, the administration was repeated twice or three times at week-long intervals.

Results and Discussion

The results showing the efficacy of the therapy of neurological and articular form of streptococcal infections in pigs are presented in Tables 1 and 2.

The proportion of the recovered animals affected with neurological symptoms of stage III stood at 44.4% on “P” farm and at only 28.6% on the farm “W”. The positive

Table 1 Efficacy of ceftiofur in treatment of different stages of neurological form of swine streptococcosis

<table>
<thead>
<tr>
<th>Farm</th>
<th>Severity of lesions (stage)</th>
<th>Number of animals</th>
<th>% of recoveries (subsequent injections of antibiotic)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>“P”</td>
<td>I</td>
<td>5</td>
<td>66/93.0/0.0/1.4/69.7%</td>
<td></td>
</tr>
<tr>
<td>“W”</td>
<td>I</td>
<td>98</td>
<td>92/93.9/0.0/0.0/96.9%</td>
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</tr>
<tr>
<td>“P”</td>
<td>II</td>
<td>9</td>
<td>6/8.1/26/4.6/35.6%</td>
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</tr>
<tr>
<td>“W”</td>
<td>II</td>
<td>48</td>
<td>12/25.0/14.2/6.2/32.6%</td>
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</tr>
<tr>
<td>“P”</td>
<td>III</td>
<td>9</td>
<td>0/0.0/1/3.3/0.4%</td>
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<tr>
<td>“W”</td>
<td>III</td>
<td>28</td>
<td>1/3.6/3/10.7/4/4.3/8.2/86.6%</td>
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</tr>
</tbody>
</table>

Table 2 Efficacy of ceftiofur in treatment of different stages of articular form of swine streptococcosis

<table>
<thead>
<tr>
<th>Farm</th>
<th>Severity of lesions (stage)</th>
<th>Number of animals</th>
<th>% of recoveries (subsequent injections of antibiotic)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>“P”</td>
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<td>88/92.6/77.4/0.0/95.10%</td>
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<tr>
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<td>“P”</td>
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</tr>
<tr>
<td>“W”</td>
<td>II</td>
<td>42</td>
<td>12/24/7/16.7/12/28.6/20/47.7%</td>
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</tr>
<tr>
<td>“P”</td>
<td>III</td>
<td>28</td>
<td>0/0.0/0/3.10/7/3/10.7</td>
<td></td>
</tr>
<tr>
<td>“W”</td>
<td>III</td>
<td>20</td>
<td>0/0.0/0/1.45/5/1.45/3/10.7</td>
<td></td>
</tr>
</tbody>
</table>

The proportion of the recovered animals affected with neurological symptoms of stage III stood at 44.4% on “P” farm and at only 28.6% on the farm “W”. The positive

Recommended outcome of polyarthritis treatment in the three week period of observation was noted in 10,7% of the cases on the farm “P” and in only one weaner (4,5%) on “W” farm.

While discussing articular form of streptococcal infections, it should be mentioned that the cases of treatment failure, contrary to neurological form, didn’t represent losses, but chronic inflammations persisting beyond the observation period and requiring further therapeutic procedures or, which was more frequent, culling of the animals.

In conclusion it may be stated that ceftiofur is characterized by the significant efficacy in treating early diagnosed, in particular, and cured clinical symptoms. This first in vivo efficacy depending on intensification of the disease data indicate good penetration of the antibiotic into joints and cerebrospinal fluid during inflammation. The timeliness of diagnosing and treating an ongoing S.suis infection plays a critical role in the efficacy of the therapy.

References