

## COMMUNICATION II

# Analysis of Case Records of Foetal Deaths in Livestock in Serdang, Selangor

### ABSTRAK

*Kes-kes kematian fetus dalam rekod nekropsi Fakulti Kedokteran Veterinar dan Sains Peternakan, Universiti Pertanian Malaysia dalam tempoh 5 tahun (1977-1981) telah dianalisis. Daripada 119 kes kematian fetus, 49.0% adalah keguguran, 41.0% lahir mati dan 10.0% kelahiran lemah dan pramasa. Kebanyakan kes terutamanya keguguran (96.5%), tidak dapat didiagnosis. Satu hal yang ketara ialah kematian fetus bukan disebabkan oleh penyakit-penyakit yang berjangkit.*

### ABSTRACT

*Cases of foetal death in the necropsy records of the Faculty of Veterinary Medicine and Animal Science, Universiti Pertanian Malaysia over a 5-year period (1977-1981) were analysed. Of 119 foetal deaths, 49.0% were abortions, 41.0% stillbirths and 10.0% premature non-viable births. Most of the cases, particularly abortions, (96.5%) remained undiagnosed. There was a remarkable absence of foetal deaths due to infectious diseases.*

### INTRODUCTION

Foetal death manifested clinically as abortion, stillbirth or premature non-viable birth is a major constraint in the livestock industry. It is economically of great concern to the livestock producer for not only is the expected offspring lost but it may be followed by a prolonged period of uterine disease and sterility leading to replacement of the reproductive female. Further, if the cause of the death is infectious, the rest of the breeding herd is also at risk. In cattle, for example, the incidence of foetal deaths is considerably high occurring between 7 to 12% in cows confirmed to be pregnant, 30 to 50 days after breeding (Mitchell, 1960).

This paper attempts to provide information on the extent of foetal deaths among livestock in Serdang, Selangor.

### MATERIALS AND METHODS

The necropsy records available in the Faculty of Veterinary Medicine and Animal Science, Universiti Pertanian Malaysia (UPM) over a 5-year period from January 1, 1977 to

December 31, 1981 were analysed for cases of foetal death. Most cases were from livestock units at UPM and a nearby agricultural research institute as well as from the neighbouring smallholders. Most foetal carcasses were markedly autolysed and unaccompanied by the placenta. Bacteriological studies of stomach contents, lung and liver were routinely carried out including the examination of smears of the stomach contents using Gram's and modified Ziehl-Nielsen stains. Dark field examination was done in cases when leptospira infection was suspected. For histopathological examination, tissues were fixed in 10% buffered formalin and sectioned at 6 $\mu$  and stained with hematoxylin and eosin. Limited virological studies on frozen tissues were done when viral abortions were suspected.

Foetal deaths were divided into abortion, stillbirth and premature non-viable birth according to Miller (1977).

### RESULTS

A total of 119 cases of foetal death were observed over the 5-year period. Table 1 shows

TABLE 1  
Cases of foetal death in different species of livestock in Serdang

Diagnosis	Cattle	Buffalo	Goat	Sheep	Pig	Total (%)
<b>A. Abortion</b>						
No diagnosis	26	2	11	2	15	56 (96.5)
Others*	2	—	—	—	—	2 (3.5)
Total	28	2	11	2	15	58 (49.0)
<b>B. Stillbirth</b>						
No diagnosis	18	1	5	1	5	30 (62.5)
Dystocia	9	1	3	—	1	14 (29.2)
Foetal anomaly	2	—	—	—	—	2 (6.2)
Septicemia	1	—	1	—	—	2 (4.1)
Total	30	2	9	1	6	48 (41.0)
<b>C. Premature non-viable birth</b>						
No diagnosis	4	2	3	—	—	9 (69.2)
Septicemia	2	—	—	—	—	2 (15.3)
Others**	2	—	—	—	—	2 (15.5)
Total	8	2	3	—	—	13 (10.0)
<b>SUM TOTAL (%)</b>	<b>66 (55.5)</b>	<b>6 (5.0)</b>	<b>23 (19.5)</b>	<b>3 (2.5)</b>	<b>21 (17.5)</b>	<b>119 (100.0)</b>

\* Clinical history of the dams states that abortion occurred following treatment with xylazine.

\*\* Clinical history indicates that both dams were severely undernourished during pregnancy.

these cases classified according to types of death in the various species of livestock.

Cattle represented more than half the cases (55.5%) while sheep the least (2.5%). Almost half (49.0%) of the foetal deaths were abortions followed closely by stillbirths (41.0%) while premature non-viable births were the least (10.0%).

A large majority of the cases of abortion (96.5%), premature non-viable birth (69.2%) and stillbirth (62.5%) remained undiagnosed. There was a glaring absence of foetal deaths due to infectious diseases. Two cases of abortion in cattle occurred subsequent to treatment of the

pregnant dams with xylazine<sup>1</sup>. Fourteen of the 48 cases (29.2%) of stillbirth were due to dystocia. Three stillborn cattle fetuses had anomalies including a case each of schistosomus reflexus which has been reported elsewhere (Fatimah *et al.*, 1981), an interatrial septal defect and an unspecified musculoskeletal defect.

Four cases of foetal septicemia of unestablished aetiology were observed, two each in stillbirths and premature non-viable births. Two other cases of non-viable birth were suspected to have resulted from a severe undernourishment of the pregnant dams.

<sup>1</sup>Rompun® — Bayer Vetchem (Korea) Ltd.

## DISCUSSION

Foetal death is a common occurrence in the farms studied. The species distribution of the problem being highest in cattle and least in sheep is only apparent. There was a correspondingly much higher accession of bovine cases over the other species with ovine cases being the least as was seen in 1977 (Sheikh-Omar and Chulan, 1980).

The remarkable absence of foetal deaths attributable to infectious causes, with the exception of the four cases of foetal septicaemia, may be due to several factors. The two most important factors were the non-availability of the placenta for examination and the autolysed state of most of the carcasses. Another factor could be that important infectious diseases influencing reproduction were indeed not a problem in Serdang even though diseases such as bovine brucellosis (Mohd. Anwar, 1977), leptospirosis (Joseph, 1979; Brandenburg and Too, 1981; Bahaman and Ibrahim, 1983) and infectious bovine rhinotracheitis (Ibrahim *et al.*, 1983) have all been recognised in Malaysia. It is therefore, tempting to speculate that the non-infectious causes of foetal deaths such as starvation, toxicosis and heat stress which produce little pathological changes in the dead foetus, are of greater importance.

Field veterinarians should recognise the importance of the placenta and a complete history in arriving at a definitive laboratory diagnosis in cases of foetal death.

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