

EQUINE CERVIX STUDY IN BARREN MAIDEN MARES

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INTRODUCTION: The necessity of a patent cervix was discovered early (Evans et al. 1986), but its practical importance in stud farm practice was recognized much later. Drainage is likely to be impaired, if the cervix does not open properly during oestrus. Older mares, especially older maiden mares, may have fibrosis of the cervix developing “Old maiden mare syndrome”. Cervical fibrosis may compromise the ability of the cervix to relax and dilate (Estrada, Samper, 2007). In nulliparous mares poor cervical relaxation is a principal cause for the delay in uterine clearance (LeBlanc et al.,1998). The importance of the opening of the cervix in etiology of endometritis in barren maiden mares have been investigated little. This is a preliminary study of equine cervix in barren maiden mares.

MATERIALS AND METHODS: A total of 21 clinically normal, barren maiden Latvian breed mares (average age 20) where used in the study from early September till late November, Year 2011. Mares where slaughtered and a swab from uterus and cervix where collected, using glass slide within 48 hours for examination of PMNs. Before the samples where collected the status of the cycle was detected by visual examination of the ovaries. Uterus, ovaries and cervix was examined for some unusual conditions by visual examination. The opening of the cervix was measured by inserting the finger through the cervix and by visual examination. For detection of PMNs in uterine swab samples a Diff Quick method was applied. Uterine and cervix samples were examined by light microscopy (400x magnification) for the presence of neutrophils per 10 fields and scored as none, +1 (1 - 10), +2 (>10) and +3 (large clumps of neutrophils).

RESULTS: Most of the mares (n=11) had 1 – 10 neutrophils in the uterine and 1 - 10 neutrophils in cervical swabs, independently from the cycle. There where two mares who had > 10 neutrophils in the uterine and cervical swabs. The rest of the mares (n= 8) had no neutrophils in the uterine and cervical swabs. One mare had >10 neutrophils in the cervix swab, but in the uterus swab she had 1 – 10 neutrophils per 10 fields. Opening of the cervix for most of the mares (n= 14) where one finger independently from the cycle. Even if the opening was one finger in oestrus, dioestrus and anoestrus, half of the mares had cervical tightening in portio vaginalis which leads us to think that they might have cervical fibrosis even thou they have never been bred and had no history of any gynecology disorders. To our knowledge equine cervix has not been studied much in response to endometritis and periglandular fibrosis in mares. More research needs to be done.