

Abstract

The aim of my doctoral thesis is the detailed study of the behavioural and sociobiological principles associated with the period of lactation. Suckling data covering almost 80 foals of domestic horse (*Equus caballus*) was obtained within four years of observation in the National Stud in Kladruby nad Labem, Czech Republic. The data were evaluated together with the reproductive history of the mothers, their agonistic interactions and following analysis of the dominance position of subadult foals. The first study describes longer suckling (greater maternal care) in dominant mares compared to submissive ones. Dominant mares are also less disturbed during nursing, whereas they terminated the nursing of submissive mares more often. A possible competitive advantage for the offspring of dominant mares may arise from such behaviour. The second paper enlightens the reproductive strategy of mares facing double maternal investment; suckling of the foal and pregnancy at the same time. I found out, contrary to the expectations, that the pregnant mares neither suckled their foals less nor terminated more suckling compared to non-pregnant herdmates. They may try to compensate their suckling foal with the perspective of its early weaning due to ongoing pregnancy. In the third and fourth manuscript I studied, how mother can behaviourally affect the foal during suckling. I observed how the dominance position of the lactating mare and suckling parameters may influence the dominance position of the subadult offspring within the group of horses of the same sex and age. I revealed that age is the primary factor affecting the dominance position of the young, combined with the residency in the herd. I also found the moderate correlation for the dominance position of the foals born from the same mother in two consecutive seasons. It indicates individual differences in the contribution of the mare, pointing out the existence of certain maternal style. In the last paper the lateralized nature of suckling is discussed. I hypothesised that if the right hemisphere of the horse brain is better adapted for processing the negative or fearful stimuli, so the behaviour of the mother during suckling, when the foal may observe the surrounding with one eye only, may potentially be the factor affecting this phenomenon. However, this hypothesis could not be confirmed. Instead, we found strongly lateralized behaviour of the suckling foal, caused by the foal itself, so we classified it as motor lateralization, similarly as the human handedness. Hereby presented results bring new knowledge in the field of the dominance relationship between herd members and between the mother and the foal. I paid attention to the factors affecting maternal investment during the lactation period and described the development of motor lateralization during suckling.