nificant differences in body weight and withers height between OC affected or OC unaffected Warmblood foals. Differences in body weight were noticed with regard to the location of osteochondrotic lesions. These findings were confirmed by *Jelan* et al. (1996) in Thoroughbred horses (N=798). It is assumed that there are different pathogenic factors for the development of osteochondrotic lesions in horses. In consequence, a high body weight might be detrimental in those foals who were genetically predisposed with osteochondrotic lesions in the hock. However, in this Hanoverian foal population growth rates were quite moderate and body weight should not be overestimated as several etiological factors might play a role in osteochondrosis.

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Measurement of the major components in colostrum of mares in the post partal period

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Introduction

Because colostrum has an particularly high nutritive value, the goal of the present study was to evaluate the main nutrients in the post partal period (*Meyer* and *Kamphues* 1990).

There is a lack of published values on milk parameters in the mare as far as inflammation is concerned. In view to characterise the health status of the udder inflammatory parameter (somatic cells, NAGase-activity and chloride) were evaluated post partum (*Schüttel* 1999).

Material and methods

Colostrum samples were collected five times within the first 12 h post partum (p.p.) (n=360) of each half of the udder from 36 Warmblood mares of one stud farm. The foals were muzzled over the first 6 hours post natum. The mares were divided into three groups (group I: 1. parturition, three and four year-old mares; group II: 3. parturition, five to seven year-old mares; group III: 4. and > 4. parturition, older than seven year-old mares). The main colostrum components protein, lactose, fat, urea as well as the somatic cells were measured from refrigerated bronopol (2-Bromo-2-nitro-1,3-propandiol) -preserved material. The NAGase-activity (N-acetyle-b-D-glucosaminidase) and the concentration of chloride were determined from deep frozen samples.

Results

- Multiparous mares have a mean colostral volume of 1020 ml and, in primiparous mares, a mean volume of 527 ml was determined within the first three hours p.p..
- There was no difference in the colostral volume and in the ingredients between the two halves of the udder in healthy mares.
- The main colostral components depend on the stage of lac tation (see Tab.). There are significant differences between the different groups of mares regarding these components.
- The somatic cell count and the concentration of chloride are remarkably higher in colostrums than in milk.
- NAGase-activity in colostrum is 80 times higher than it is in serum.

Tab 1 Components (arithmetic and geometric1) means) in the total colostrum of the healthy mares collected at different times p.p. (2) n=35 mares 3) n=36 mares).

Parameter	0 h p.p.	6 h p.p.	12 h p.p.
Protein [%][2)]	14.85	7.47	3.54
Fat [%][2)]	1.38	1.38	1.8
Lactose [%][2)]	2.86	4.6	5.59
Urea [mg/l][2)]	246	330	353
Cells x 10^3 [SCC/ml][1, 2)]	565	374	182
NAGase-activity [nmol min^{-1} ml^{-1}][3)]	164	72	24
Chloride [mmol/l][3)]	33.5	30.7	22.0

Discussion

As influence of feeding of mares on the composition of the colostrum was not investigated yet, it appears difficult to compare values from different authors without that parameter considered (*Bühlbäcker* 1996).

The values of somatic cell count and NAGase-activity measured in the present study were similar to those of other authors (*Hans* 2000).

Conclusion

As the mares evaluated in this study were clinically sound the values of composition of colostrum measured could be a sort of reference for Warmblood mares in the post partal periode.

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