

## Tush fracture/loss in a female Asian elephant

### Case report

Date: April 2018

Data provided by: Linda + Christian Schiffmann

Species: Asian elephant

Accommodation: zoo

Age, gender: 59 years, female

#### History and treatment:

*12.04.2018:*

Malodorous smell from left tush sulcus recognized during health check. No purulent discharge observed. Upon palpation the tush felt kind of loose. Palpation seemed moderately painful for the elephant. Treatment: Sulcus flushed with tap water, saline and iodine solution.

*13.-17.04.2018:*

No malodorous smell detectable. Flushing repeated on a daily basis. No signs of inflammation. Blood chemistry and hematology in the reference range. Upon palpation the tush feels loose with a mobility in cranio-caudal direction of about 0.5cm. Elephant has been observed to repeatedly rub left trunk basis against the wall.

*19.04.2018:*

Still no signs of inflammation and no discharge. Upon palpation the tush feels more loose than the days before.

*24.04.2018:*

Upon palpation the tush fell off without any visible bleeding. Subsequently the elephant reacted very sensitive on the flushing with tap water. Rinsing with cool water on the trunk base seemed to provide some relief. Analgesia was reached through a single oral dose of Meloxicam.

*25.-29.04.2018:*

Careful flushing of the sulcus on a daily basis. The elephant showed a continuous reduction in sensitivity, which resolved completely within these days.



Lost left tush. Note the irregular shape of the proximal part. The sharp edges have probably caused the sulcus lesions .

**Additional notes:** We are not aware of any scientific description of the macroscopic and microscopic anatomy and the physiology of tushes in female Asian elephants. Therefore, the underlying causes for the loss of a tush is quite speculative. We assume the proximal proliferation of the tush to be hyperplastic tertiary dentin, which has extended from the pulp (before their closure?) into the alveolar space. We can

only speculate, if such a proliferation occurs due to mechanical or inflammatory irritation. Considering the facilities for this female, chronic mechanical irritation due to lying on hard floors and leaning against hard structures seems reasonable. In addition, there may be an age-related cause for the loss of a tush.

**Follow up:** In June 2023 the female lost her right tush without any signs of discomfort. This tush looked very similar to the left one. Since then, both tush pockets seem to contain no remaining dental tissue at all and the gingiva has covered the alveolar space.

