INTRODUCTION

Rectal prolapse is classified as either incomplete, which involves only the rectal mucosa, or complete, in which the full thickness of the rectum prolapses through the anus. Rectal prolapse can result from various factors, including straining related to cystitis, chronic coughing, parasites and defecation disorders due to environmental or social distress.

Rectal prolapse has been observed more often in captive primates than in wild primates. Four wild chacma baboons (P. ursinus) that had fed extensively on sour fig/ice plant (Carpobrotus spp.) and three wild mountain gorillas (Gorilla gorilla) that fed on Malabar spinach (Basella alba) developed rectal prolapses. In all but one (a gorilla), they spontaneously resolved within 1-2 days (L. Barrett and S.P. Henzi, pers. comm.). Here, we report rectal prolapses in two wild anubis baboons (P. anubis) related to provisioning with maize, and capture.

CASE REPORTS

2.1 | Case 1

Between 20 October 2016 and 5 November 2016, at the end of the dry season (rainfall: 6.8 mm in Oct, 51.8 mm in Nov), baboons at Mpala Research Centre, Kenya (0.17°N, 36.53°E) were provisioned with dried maize in preparation for capturing. A habituated juvenile female (named "to") in Al group was not captured although she did have access to the maize. On 7 November 2016, at 09:50 AM, we observed to with no symptoms of rectal prolapse (Figure 1A). By 10:36 AM to had a complete rectal prolapse, with pink surface exposed (Figure 1B). At 05:03 PM, to was observed lying on her ventrum on a rock, with the rectal prolapse slightly desiccated (Figure 1C,D). At that time, the prolapse was approximately 6-7 cm long and 3-4 cm wide. At 08:28 AM the next day, to was observed without the rectal prolapse. It was not observed to recur during the subsequent 8-month research period.
2.2 | Case 2

Baboons were also provisioned with dried maize in preparation for capturing between 28 December 2013 and 23 January 2014, during the dry season (rainfall: 17.5 mm in those 2 months). On 15 January 2014, we captured an unhabituated adult female (named ‘TH’) in L1 group using a cage trap. TH became visibly agitated and avoided us as attempts to immobilise her with a syringe failed. After we switched to a blowpipe, TH was successfully immobilised and then we detected the rectal prolapse. TH’s rectum was pushed back in place, and we released her when she was fully awake. We did not observe TH after that but monitored TH remotely for 6 months by GPS.8

3 | DISCUSSION

In captive primates, rectal prolapse occurs at various ages3–5,7, whereas in wild primates, 9 of 10 have occurred in juveniles (L. Barrett and S.P. Henzi, pers. comm.),2 including our Case 1. Our Case 2 was an adult but, unlike the others, TH experienced distress during capture and immobilisation. In wild primates, rectal prolapse also appears to be associated with intensive feeding on one particular food item (L. Barrett and S.P. Henzi, pers. comm.),2 Both of our Cases had fed extensively on dried maize. Dried maize has low-water and high-fibre content,7 which can lead to constipation and perhaps then to rectal prolapse.

Case 1 showed that terrestrial, quadrupedal primates with rectal prolapse can move long distances, as TH walked to the sleeping site (2.5 km) even with a rectal prolapse. However, the fact that TH was not sitting but lying ventrally on the rock (Figure 1D) suggested that she found it difficult to sit. Prolonged rectal prolapse might interfere with various activities, such as resting, feeding or grooming because sitting is a frequent posture, accounting for an average of nearly 50% of all activities.10

This report suggests that foods with low-water and high-fibre content, either alone or with induced distress, can cause rectal prolapse. This may be more problematic in the hotter, dry season when water for drinking is less available and perspiration increases.11 Further studies will be necessary to elucidate the relationship between types of food or different seasons and the occurrence of rectal prolapse. Until then, we suggest that capture protocols take into consideration seasonality and foods used in provisioning to reduce the potential for rectal prolapse.

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