

# Minimising prevalence and severity of croup lesions in cart-pulling donkeys by adjusting cart shaft length in Jacobabad Pakistan



The Brooke Pakistan

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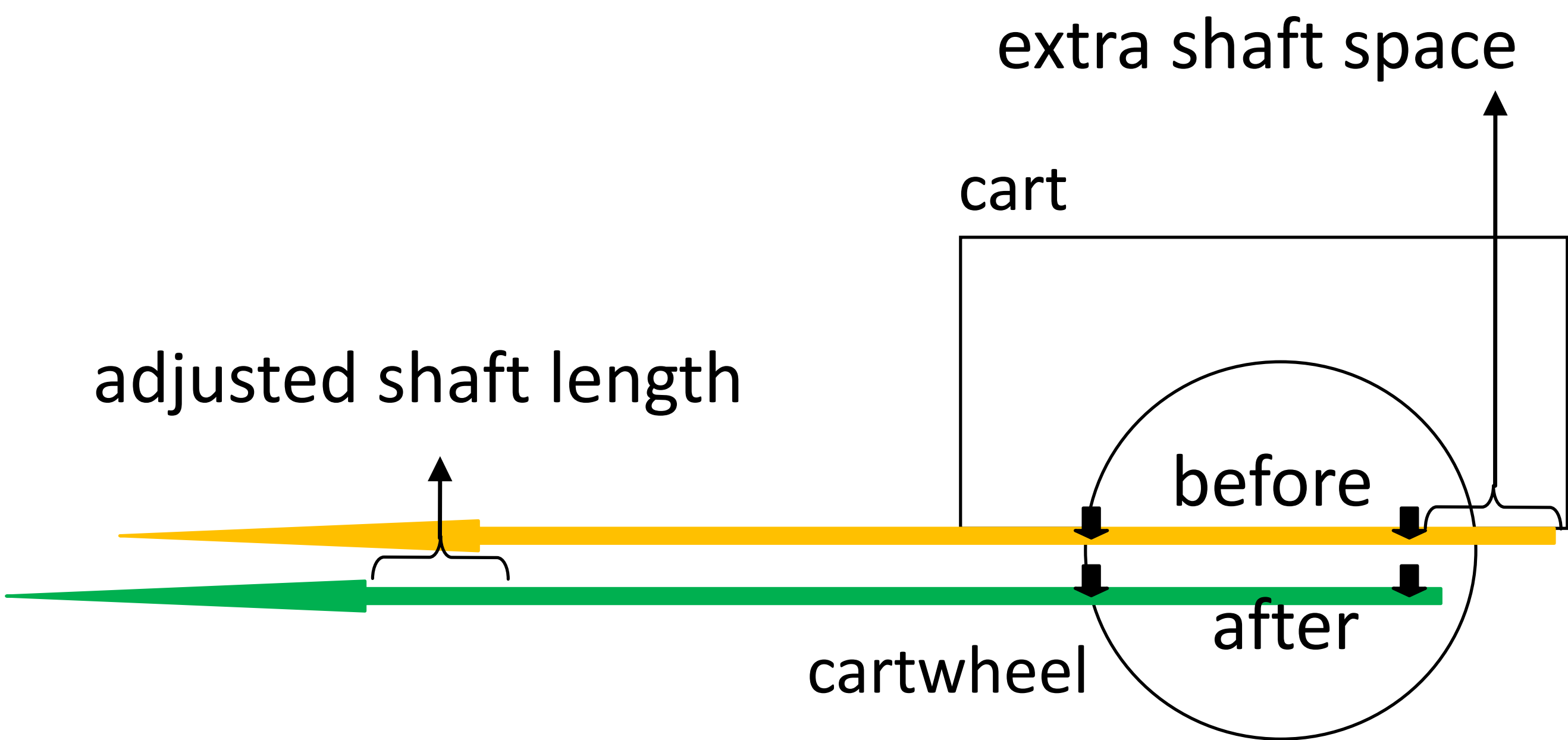
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## Introduction

- Croup lesions are one of the welfare-compromising work-related injuries of working donkeys in Jacobabad
- Croup lesions are, as per community and field team observations, due to direct collision of a cart against the donkey's croup area
- A survey prior to the intervention showed high prevalence of croup lesions
- Additionally they were ranked by the community as one of the most painful welfare issues of working equids
- This pilot research study aimed to evaluate if increasing shaft length could reduce prevalence and severity of croup lesions in donkeys



**Figure 2:** Illustration of cart shaft length adjustment to avoid croup lesions. The shaft length adjustment will allow an additional 15–30cm space

**Figure 1:** A cart donkey with a croup lesion



## Methods

- A baseline study was undertaken to assess prevalence of croup lesions
- Twenty-eight donkeys with croup lesions (at least skin broken) were selected for the pilot study
- Croup lesion length and severity level were recorded in addition to shaft length
- The cart was referred to a nearby cart maker (Figure 3)
- An increase in shaft length (15–30cm) was suggested, keeping in mind animal size and cart capacity (Figure 2)
- Data on lesions were collected fortnightly over two months

## Summary

- A survey on 200 cart-pulling donkeys reported high (60%) prevalence of croup lesions in Jacobabad
- The survey showed that 95% community members attributed croup lesions to collisions against the cart
- Twenty-eight donkeys with croup lesions were selected
- Shaft length was increased by between 15 and 30 cm allowing for donkey size and the cart's capacity for shaft length adjustment
- A significant decrease was observed in both prevalence and severity of croup lesions in target donkeys

Croup lesion severity category	Number of donkeys		P-value
	before intervention	following intervention	
0	0	9	P<0.0001
1	0	15	
2	11	1	
3	17	3	

**Table 1:** Prevalence of croup lesions in target cart donkeys before and after intervention

## Results

Over 60% donkeys in the initial survey had croup lesions, and over 95% owners and cart makers agreed croup lesions were caused by collision of the cart against the donkey. Both community members and cart makers, however, thought these lesions could be minimised through adjusting the shaft length, which had not been previously attempted (Figure 3).

Following appropriate shaft length adjustment

- Wound severity improved significantly (Table 1)
- Average wound length reduced from 6.1cm to 2.4cm (P <0.0001)

## Conclusions

- Space of at least 20cm between the animal's croup area and the cart was mandatory to avoid collisions against the cart and hence croup lesions
- Therefore increasing existing shaft length could help to prevent croup lesions in cart-pulling donkeys
- However, the size of each donkey should be kept in mind: owners require advice to ensure that their cart's shaft length is an appropriate length for their donkey
- Cart makers should be advised to keep shaft length adjustable to at least three different positions in future to help owners adjust shaft length according to their animal



Presented by  
Sher Nawaz



**Figure 3:** A local cart maker is making the advised shaft length adjustment