

# How common are feeding difficulties among infants with neonatal brain injury?

Sarah Edney<sup>1</sup>, Anna Basu<sup>2</sup>, Celia Harding<sup>3</sup>, Lindsay Pennington<sup>2</sup>

<sup>1</sup>Lancashire Teaching Hospitals NHS Foundation Trust (Sarah.Edney1@nhs.net)

<sup>2</sup>Population Health Sciences Institute, Newcastle University

<sup>3</sup>Division of Language and Communication Science, City, University of London

## Purpose

Feeding difficulties are common among infants with neonatal brain injury, a group often excluded from neonatal feeding research. At present, there is insufficient knowledge about feeding difficulties in these infants to inform intervention and education resources. This study aims to provide data on feeding disorders in infants with brain injury during the neonatal period.



## Methods

A retrospective case note analysis was undertaken to determine the incidence of feeding difficulties (defined as full or partial tube feeding at 40 weeks, or at one-week post-birth if born at 39 weeks or over) among surviving infants with brain injury admitted to a UK neonatal unit between 2013-2017. 202 infants with brain injury were admitted during the study period and were included in the study (8% of total admissions).



## Results

Diagnoses included hypoxic ischaemic encephalopathy (HIE) (27 Grade 1, 27 Grade 2, 6 Grade 3), intraventricular haemorrhage (IVH) (38 Grade I, 39 Grade II, 11 Grade III, 20 Grade IV), intracranial haemorrhage (ICH) (3), infection (14), periventricular leukomalacia (PVL) (4), stroke (7), and multiple injuries (6). Among infants with HIE and IVH, feeding difficulty rates increased with injury severity. Feeding difficulty rates among other groups were: ICH (33%), infection (21%), PVL (50%), stroke (29%), and multiple injuries (67%).

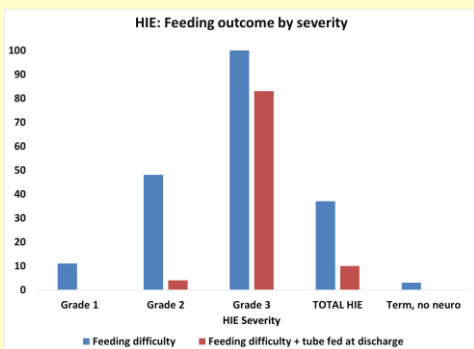


Figure 1: Hypoxic Ischaemic Encephalopathy feeding outcomes

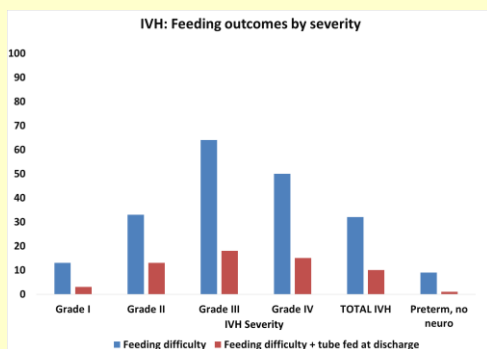


Figure 2: Intraventricular haemorrhage feeding outcomes

## Conclusions

Although samples were small, these data demonstrate that feeding difficulties are common in neonatal brain injury, even when injury severity is low. Feeding difficulties are often complex and difficult to predict, therefore specialist feeding therapists should be involved with all infants with brain injury. Further research is required to inform optimal assessment and intervention methods.

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