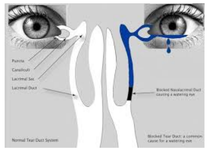
Outcomes of Nasolacrimal Duct Intubation for Persistent Epiphora in a Paediatric Population

Tasmin Berman, Ankur Raj, Jose Gonzalez-Martin
Alder Hey Children's Hospital, Liverpool

Alder Hey Children's NHS Foundation Trust

Introduction

Nasolacrimal duct obstruction (NLDO) is the most common cause of childhood epiphora[1] Congenital NLDO is managed conservatively in the first year of life, this resolves in the large majority of patients[2] .
Management is then approached in a stepwise manner surgically including syringe and probing of the nasolacrimal duct, insertion of stents (intubation) or dacryocystorhinostomy (DCR).



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Aim

To identify the outcome of intubation, and identify potential indicators of success or failure over a 2-year period

Methods

A retrospective notes review of all patients who underwent mono- and bi-canalicular intubation between Jan 2017 and December 2018 at Alder Hey Children's Hospital, Liverpool.
All procedures were carried out by those with experience in endonasal procedures in children.
Success was defined as symptomatic resolution of epiphora.
Data recorded included age, diagnosis, other health issues and time to removal of stent.

Results

Thirty-three patients (40 eyes) underwent intubation.
Four patients (4 eyes) were excluded as intubations were performed following acute trauma.
Therefore 29 patients (36 eyes) are included in analysis.
Mean age of patients was 4.4±2.88 years (range 1.5 -15.0 years)

Symptomatic success was recorded in 78% (28/36) of eyes.
The average time to removal of stents was 7.2 ± 3.8 months
Seven patients not documented time of extubating
Seven patients who had bilateral intubation; 6 were successful.

Causes of epiphora

Congenital NLDO: 27 patients (7 bilateral, 20 unilateral) all of which had undergone previous syringe and probing.

Post adenoviral infection: 1 patient

Mucocele/Dacrocystitis: 1 patient

Two patients had anatomical abnormalities:
Rothmund Thompson syndrome
Right Unicoronal synostosis requiring fronto-orbital advancement

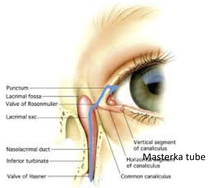
Failure

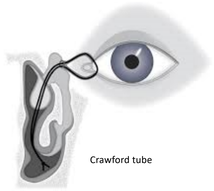
Five patients have required a DCR
One patient is awaiting review for consideration of DCR
One patient required progression to a Crawford tube and is awaiting review as they have ongoing symptoms and are likely to be listed for a DCR
One patient required reintubation

Both patients with anatomical abnormalities, were failures and required DCR.

Type of intubation

Most patients had a Masterka tube (22/29)
Two patients had Crawford tube
Two patients Intubation was unable to be performed (1 Rothmund Thompson syndrome)
Three patients did not have type of stent documented





Conclusion

Our success rate of 78% is comparable to published data[3]. There were no surgical complications reported
Intubation remains an effective management option for persistent epiphora following failed syringe and probing.

This audit highlights that In patients with anatomical abnormalities, DCR may be more appropriate as first line treatment.

References

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3: Tai E L M, Kueh Y C, Abdullah B. The use of stents in children with Nasolacrimal Duct Obstruction Requiring Surgical Intervention: A systemic Review. International Journal of environmental research and public health. 2020;17(3)