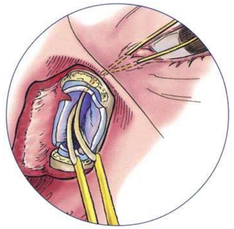
‘There’s More than Meet’s the Eye’

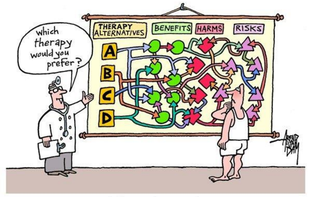
Dr Shahzaib Rehan (ST2)
Mr Tom Betts (Cons), Miss Anjan Haridas (Cons), Mr Dan Morris (Cons)
Cardiff and Vale University Health Board,
University Hospital of Wales, Cardiff

BACKGROUND

62-year-old female
2 previous Left sided DCR procedures
Jan 2017, 1st procedure, endonasal approach
March 2018, 2nd procedure, endo-nasal approach
Prior to her third procedure DCG performed - NAD

Pt AD undergoes an external DCR on 08/10/21, for an acquired NLDO…





informed consent

She is consented for: bleeding, CSF leak, orbital haematoma, infection, meningitis, scar, failure



Post op review: uncomplicated surgery, she states ‘it’s healing well…it’s watering but I know that the tubes are still in’

NB: post op image used with written consent

O/E: 6/5 R/L, found to have reduced orbicularis strength, lagophthalmos of 4mm and an inability to forcefully close, good Bell’s	No rashes, purely LMN signs, nil other neurology
? LMN CN7 palsy – ‘can’t be anything else right…’	D/W and S/B ENT – normal audiogram, Bell’s palsy diagnosed, 10/7 of steroids given

F/u 3/52 later: nil change with steroids, no ocular surface symptoms

- Ongoing orbicularis weakness, no SPEE (tubes in, watering), lagophthalmos improving 3.2mm (4mm at her last visit), able to forcefully close her lids

Bell’s palsy diagnosis re-visited and ruled out

Diagnosis – iatrogenic CN7 palsy

Is this common?...

FACIAL NERVE ANATOMY

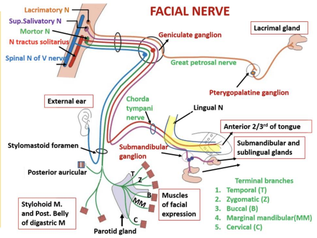
CN7 – multiple components…

Sensory and motor divisions…

Multiple functions…

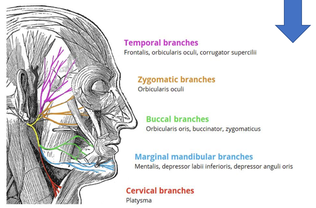
5 muscles contribute to facial expression – including the orbicularis

The lacrimal nerve and a zygomatic branch from V2 supply the lacrimal gland



Literature Review – the Key Points

- Transient orbicularis oculi muscle weakness ranging from delayed lid closure to lagophthalmos
- Serin et al. 2014: 4 case reports, ~8 weeks for complete resolution
- Fayet et al. 1994: 2 case reports, 3/12 for complete resolution. Postulated that it occurred due to disinsertion of the nasal portion of the orbicularis oculi muscle and periosteum at the time of periosteal cleavage
- Vagefi et al. 2009: 16 cases with postoperative orbicularis oculi muscle weakness among 247 surgeries (7.4%). Damage to peripheral fibres of the zygomatic and buccal branches of the facial nerve as they passed through the medial canthal region may be responsible for this complication. 14 weeks on average for resolution, 1 case 32 weeks
- Odat et al. 2015: 28 patients with eyelid closure issues post external DCR



Why it occurs?

Damage to peripheral branches of temporal, zygomatic and or buccal branches


Figure 1. Patient 2, Postoperative 1st week


Figure 2. Patient 2, Postoperative 8th week

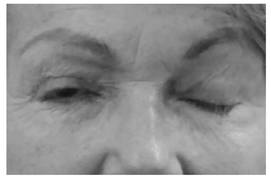

Figure 3. Patient 3, Postoperative 2nd week


Figure 4. Patient 3, Postoperative 7th week

Serin et al. 2014

DID WE FAIL THIS PATIENT?

MDU: patients should be informed about material risks

GMC:

- a. Recognised risks of harm that you believe anyone in the patient’s position would want to know. You’ll know these already from your professional knowledge and experience.

What if you don’t know?

What if you don’t know but perhaps should have known?

As per the literature review there is evidence of the phenomenon of transient orbicularis weakness post external DCR

But as operating surgeons, if we are unaware of such material risks and therefore fail to consent for them (the same could apply to any procedure) in a black and white interpretation of the of the law are we and can we be fairly labelled as being negligent?

Montgomery and Informed Consent

- Doctors have a duty to take reasonable care to ensure that patients are aware of 'material risks' (Montgomery)
- Previously the Bolam test applied – have you acted in line with a responsible body of medical opinion?
- Clinical negligence claims are no longer assessed by the Bolam test

Direct Question to the reader who performs external DCR surgery, were you aware that -

Transient orbicularis oculi muscle weakness ranging from delayed lid closure to lagophthalmos can occur after an external DCR?

But as mentioned the Bolam test no longer applies...

Therefore if this happens to one of your patients are you negligent?

References
Serin et al. 2014. A Rare Complication of External Dacryocystorhinostomy: Transient Orbicularis Muscle Weakness. TJO 46:1-5 / Fayet B, Bernard JA, Rifaraj P, Assouline M, Pouliquen Y. Transient internal palpebral inoculuson after dacryocystorhinostomy . J Fr Ophtalmol 1994;17: 195-9.
Vagefi MR, Winn BJ, Lin CC, et al. Facial nerve injury during external dacryocystorhinostomy. Ophthalmology. 2009;116:585–90 / Neuwirth-Gaudan K, Capdevila X, Rossignol R. Local anesthetic ‘in-situ’ toxicity during peripheral nerve blocks: update on mechanisms and prevention. Curr Opin Anaesthesiol. 2012;25:589-95.
Odat TA, Odat HA, Khraisat H, Odat MA, Alzoubi FQ. Post-external dacryocystorhinostomy lagophthalmos. Int Ophthalmol. 2015 Jun;35(3):375-9

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