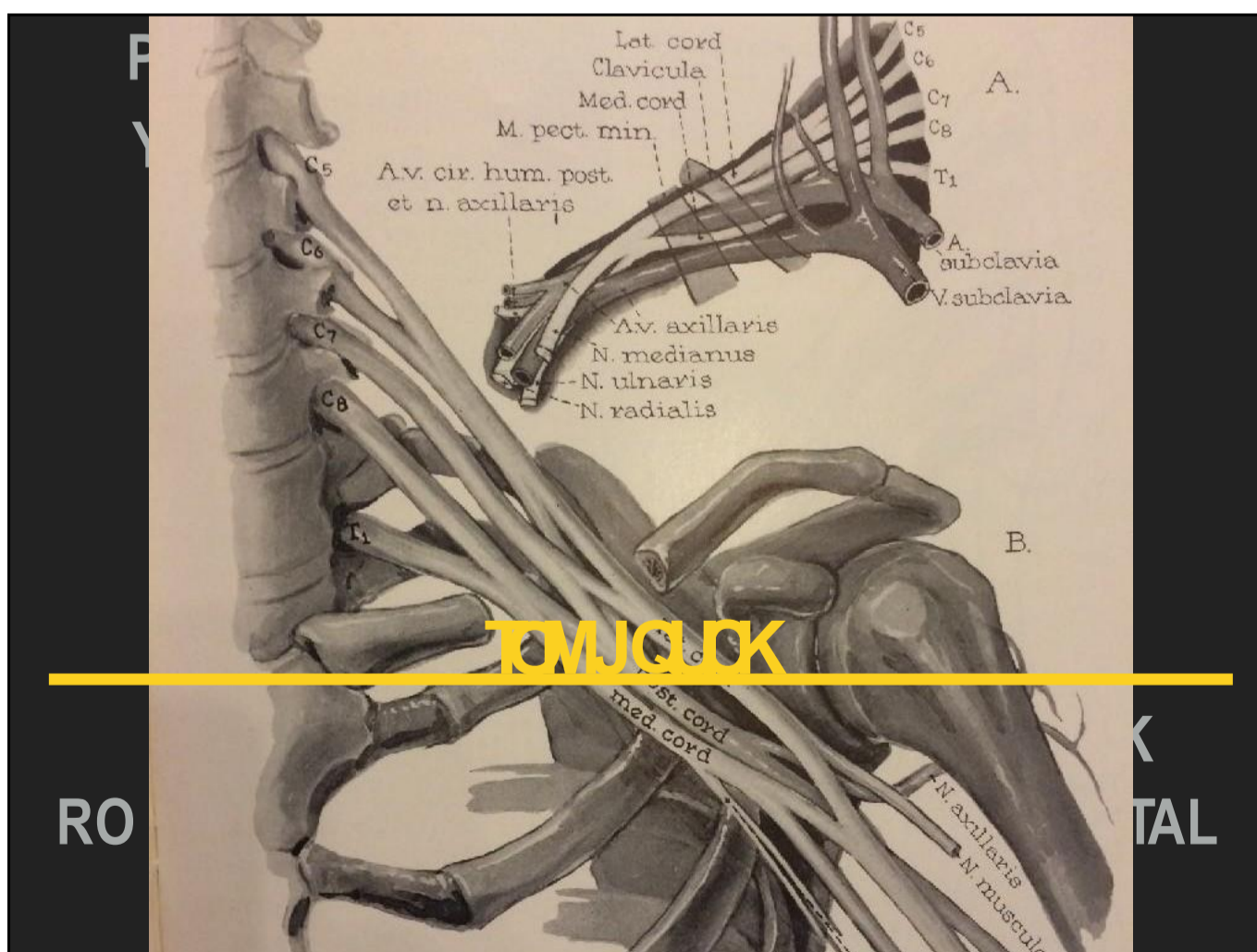


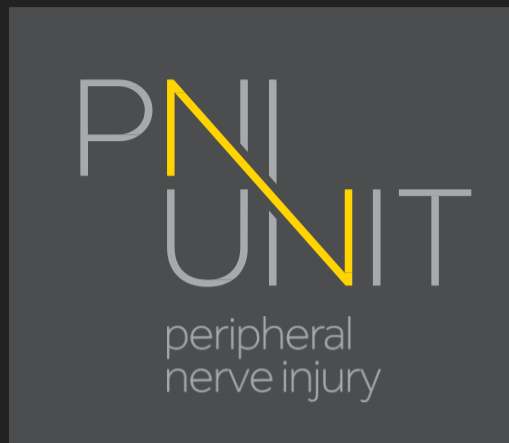
AvMA Annual Clinical Negligence Conference,

Leeds, UK

23-24 June 2017

TOM QUICK





TOM QUICK

**NERVE INJURY
FOR THE LEGAL MIND**

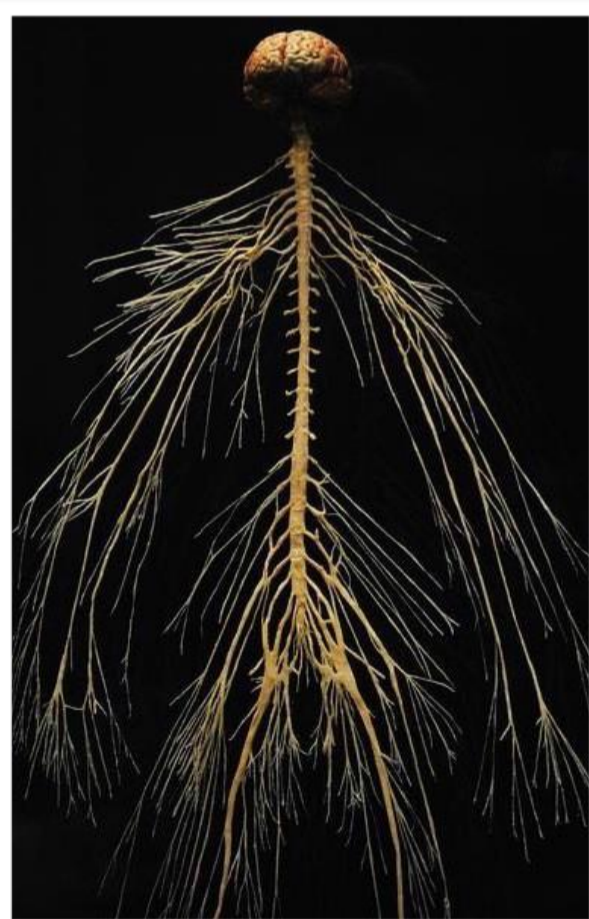
TOM QUICK

HOW TO HOLD YOUR NERVE



TOM QUICK

CONSULTANT PERIPHERAL NERVE SURGEON



WHOTREATS NERVE INJURY

- GPs
- A&E
- Orthopaedic surgeons
- Plastic Surgeons
- Neurologists
- Therapists
- Pain doctors
- Allied health

NERVOUS AIMS

- Overview of the pathology of the main types of nerve injury,
- Diagnosis and treatment

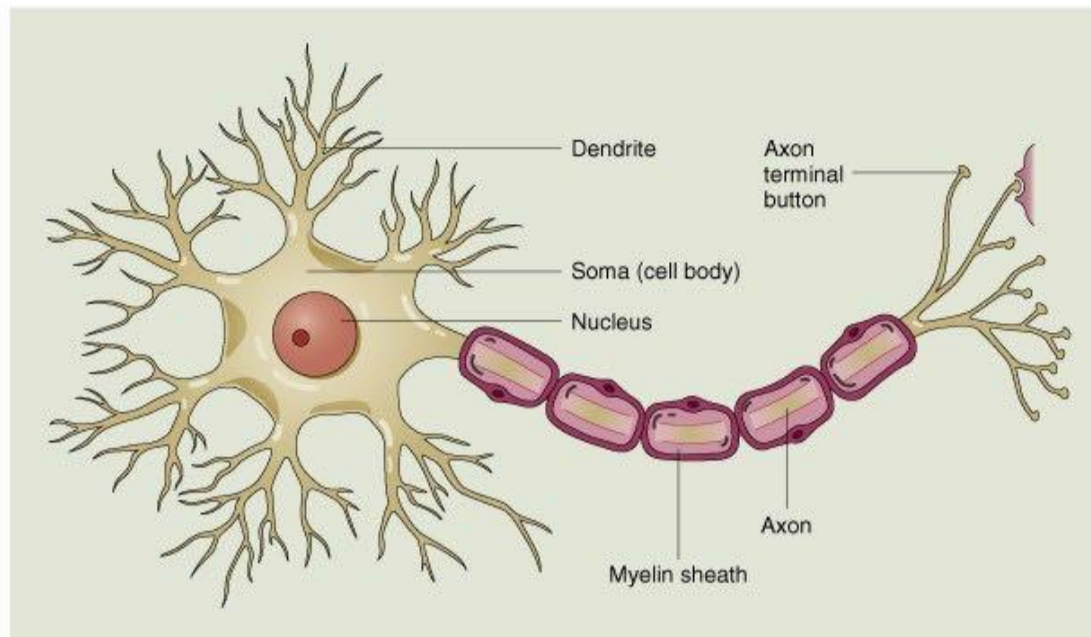
NERVOUS AIMS

- Medico-legal examples of misdiagnosis and substandard treatment or surgery
- In-depth focus on brachial plexus injury especially a birth injury, the causes and treatment.

WHAT IS A NERVE

- A nerve is a very functionally concentrated structure.
- Made up of Neurones
- Nerves control movement, touch, temperature sensation and control and pain

WHAT IS A NERVE



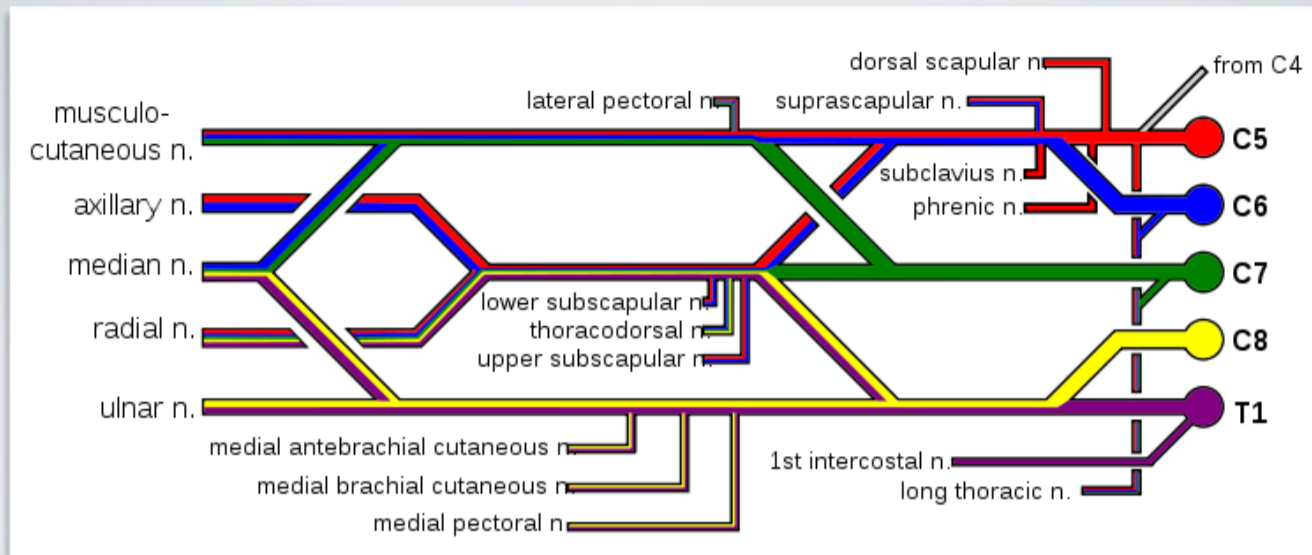
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sensation and control and pain

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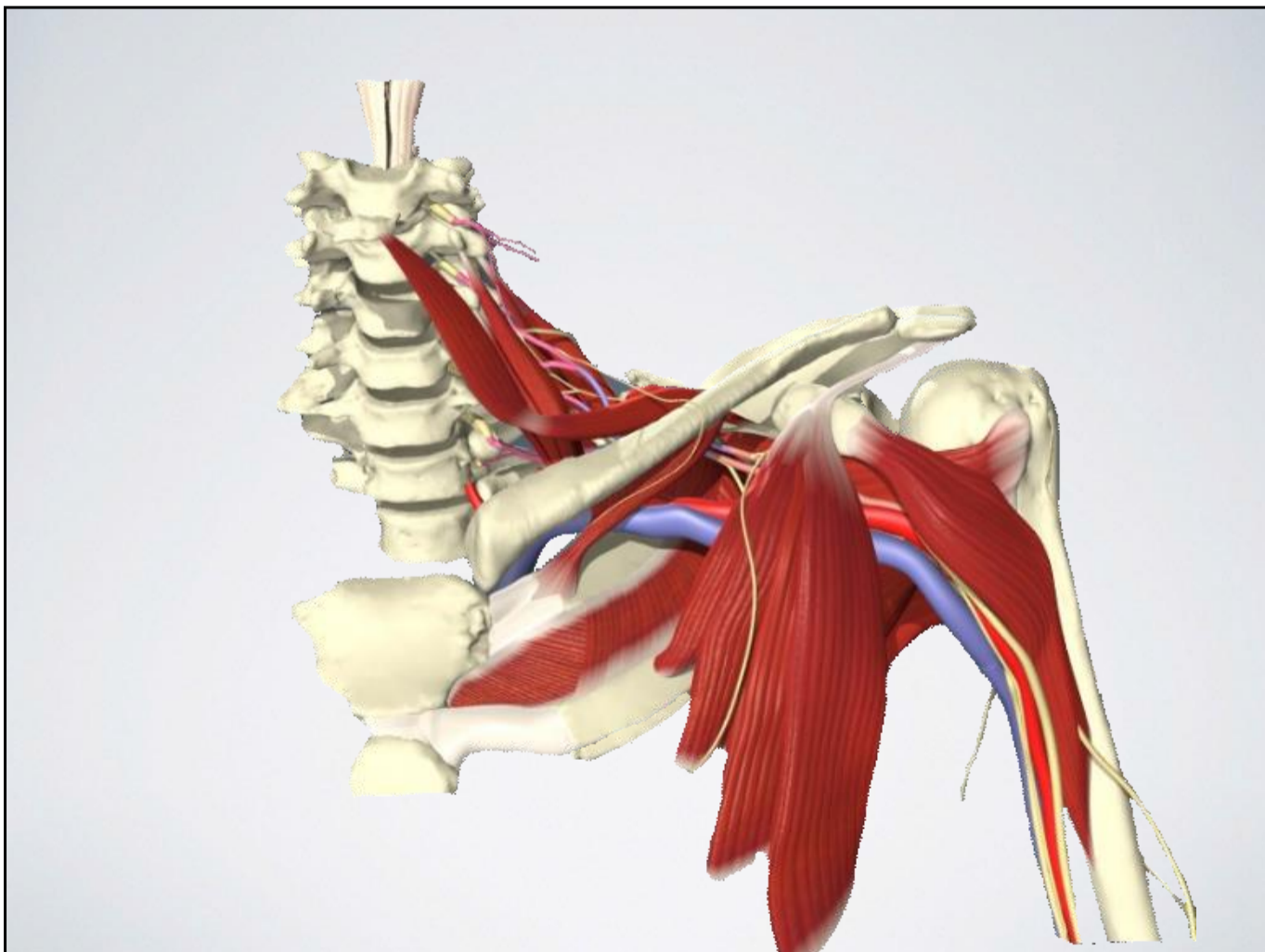
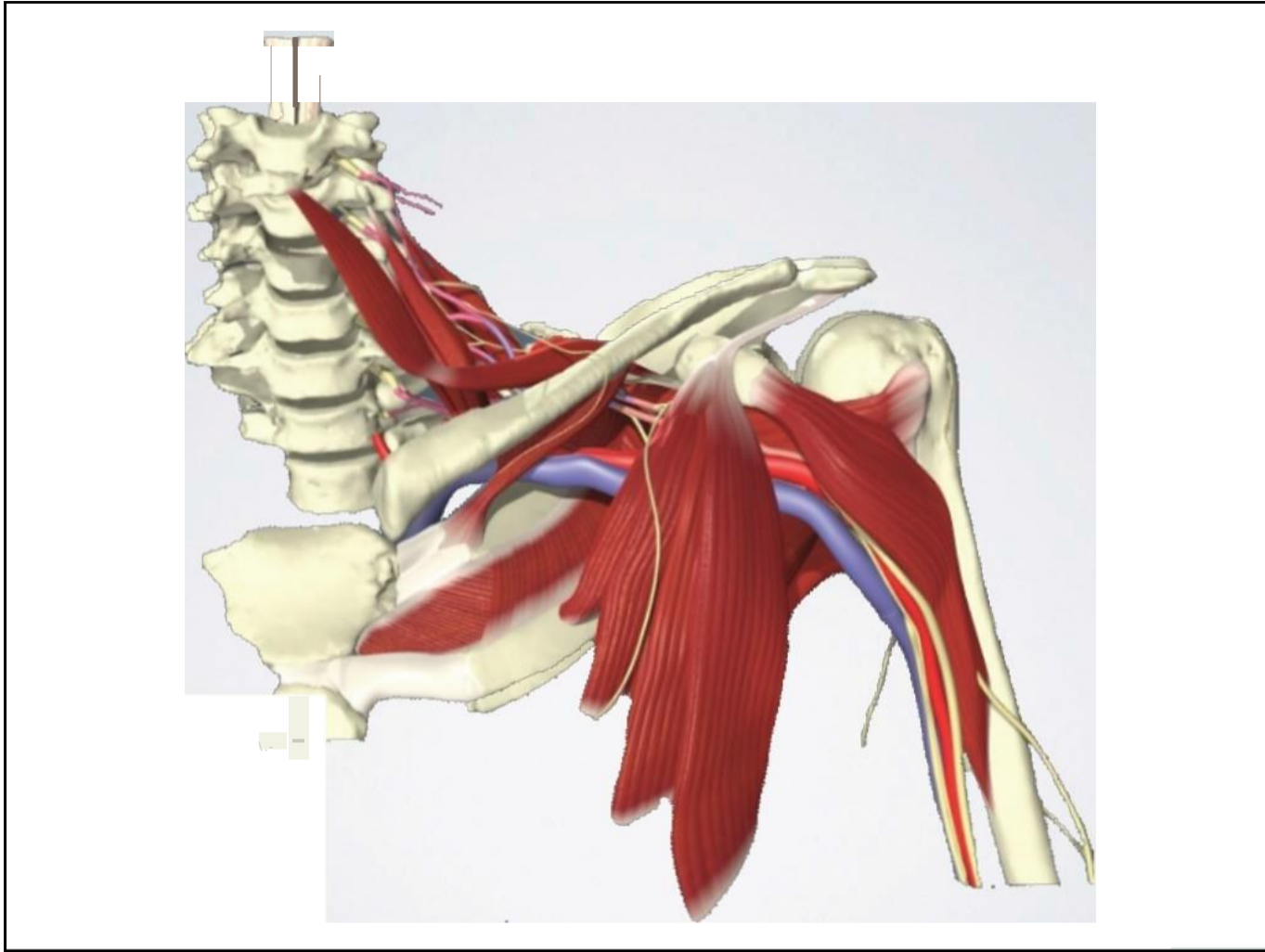
WHAT IS THE BRACHIAL



- It is in a vulnerable area between the neck and the arm.

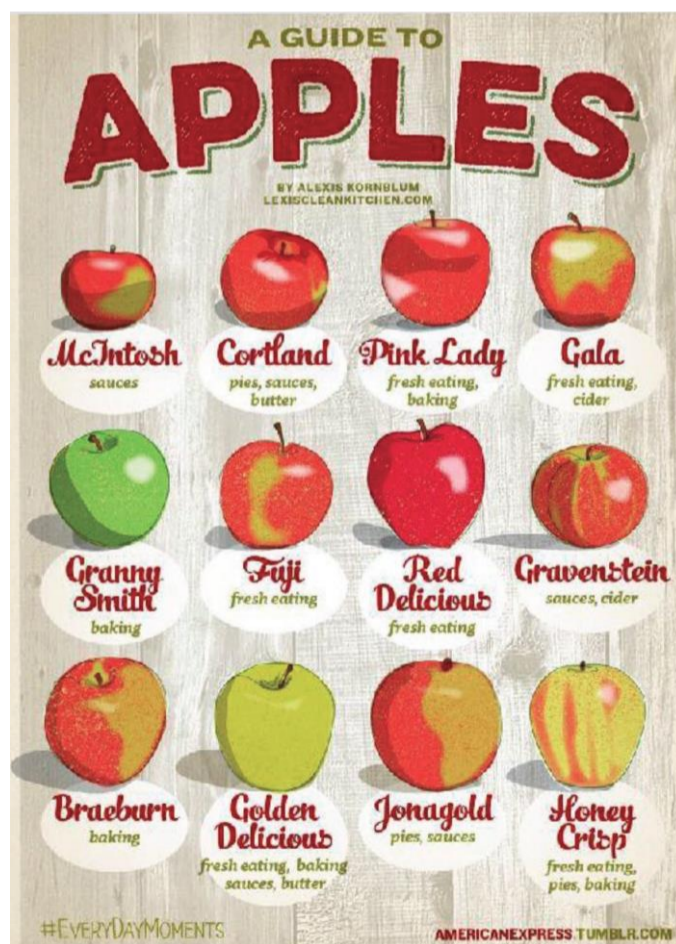
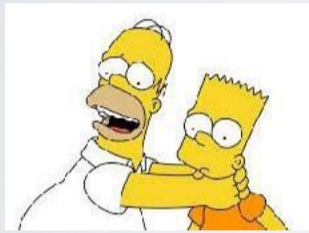
WHAT IS THE BRACHIAL PLEXUS?

- The Brachial plexus is a switching board for control the arm- a complex wiring area in the neck.
- It is in a vulnerable area between the neck and the arm.



HOW ARE NERVES INJURED

- nerves can be injured in a number of ways



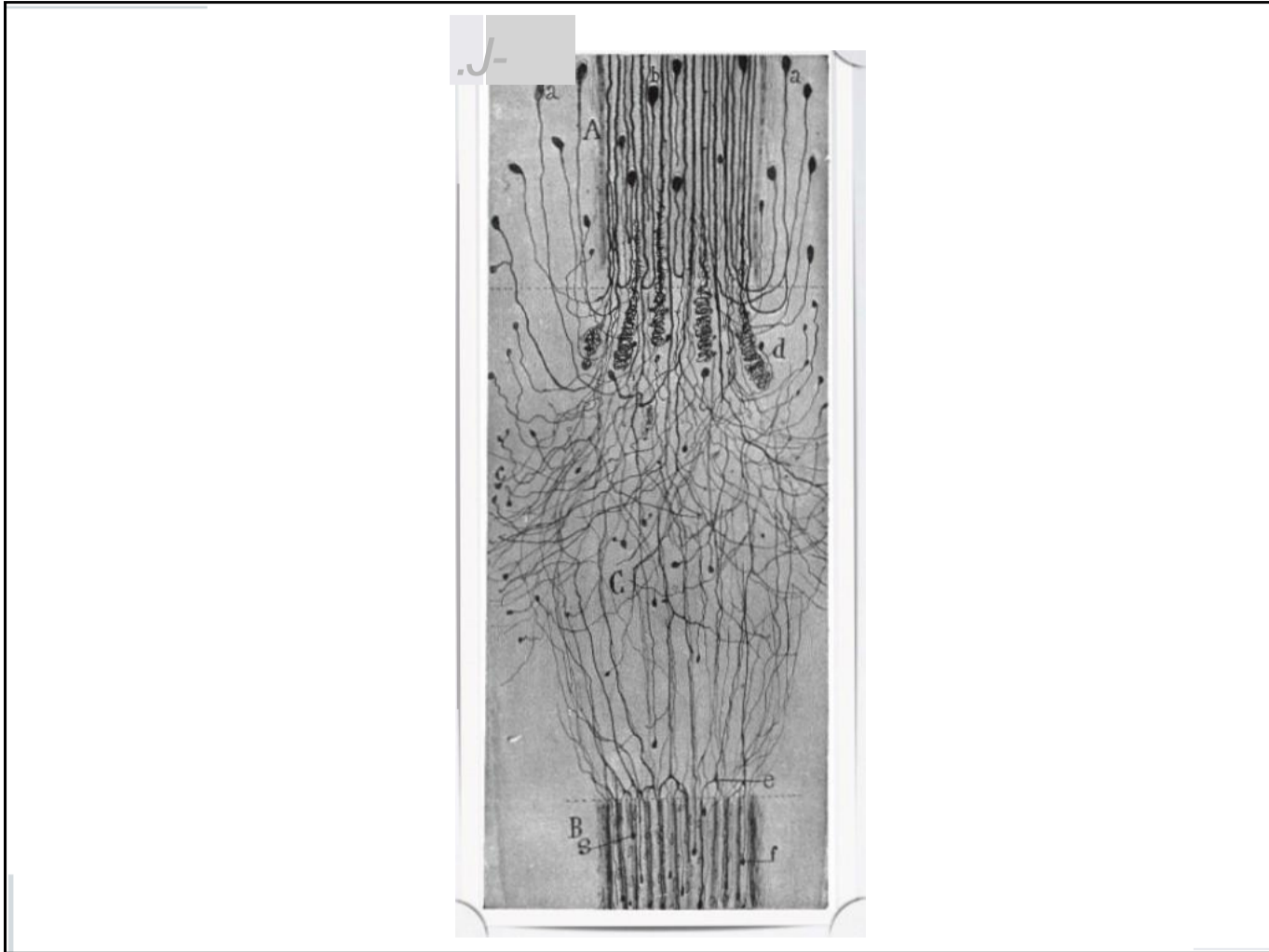


Table 1. Classification of Nerve Injury

Seddon's Classification	Sunderland's Classification	Tissues Injured
Neurapraxia	Grade I	Myelin
Axonotmesis	Grade II	Myelin, axon
Neurotmesis	Grade III: Axon continuity is disrupted by loss of endoneurial tubes, but perineurium is protected	Myelin, axon, endoneurium
	Grade IV: Nerve fascicle as damaged, but sheath continuity is maintained	Myelin, axon, endoneurium, perineurium
	Grade V: Substantial perineural hemorrhage and scarring occur	Myelin, axon, endoneurium, perineurium, epineurium

Source: References 3, 5.

IMPORTANCE OF A DIAGNOSIS

- Nerve injury is often seen as a black box
- Strangely clinicians often don't pursue a diagnosis
- without a diagnosis we cannot give a natural history or say if intervention will improve on that.
- or what the condition or prognosis is.

IMPORTANCE OF A DIAGNOSIS

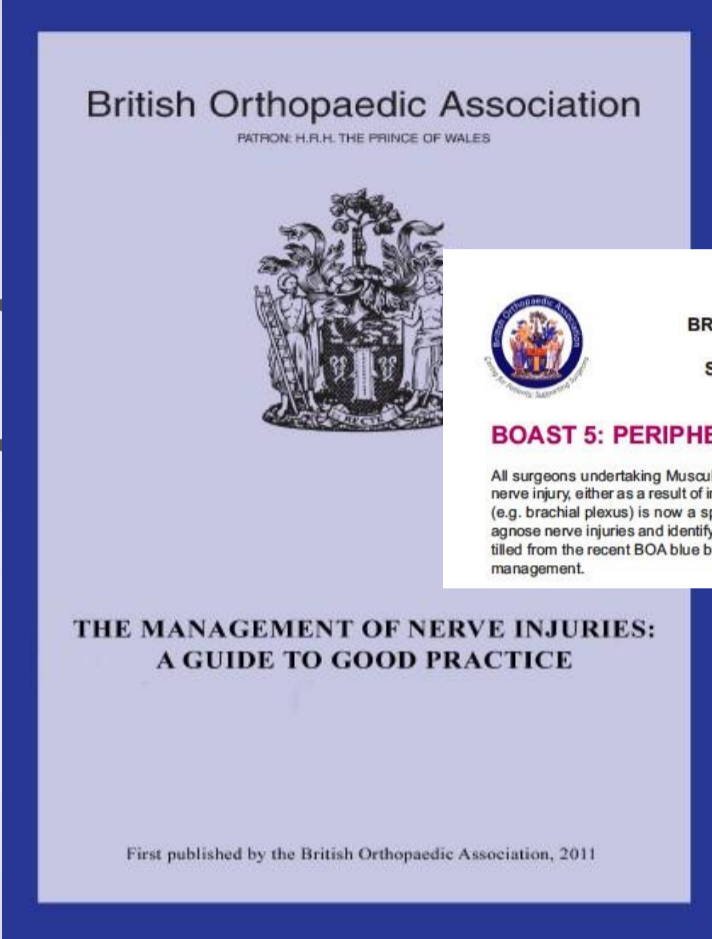
- Clinical examination **S** over time
- Neurophysiology
- Often a diagnostic operation to physically examine the site of injury.

OUTCOMES


- often difficult to predict at time of injury
- not completed until 2 years
- neurophysiology can be deployed (can be unclear and argued over)

BREACH OF DUTY OF CARE



- Bolam- ‘Reasonable person’
- Bolitho- Bolam still stands, except when "a judge can be satisfied that the body of expert opinion cannot be logically supported at all”.



TY OF CARE



BRITISH ORTHOPAEDIC ASSOCIATION
STANDARDS for TRAUMA (BOAST)
Sept 2012

BOAST 5: PERIPHERAL NERVE INJURY

All surgeons undertaking Musculoskeletal Trauma Surgery will be involved in the management of peripheral nerve injury, either as a result of injury or a postoperative complication. Nerve repair and complex nerve injuries (e.g. brachial plexus) is now a specialist field but all surgeons involved in trauma surgery must be able to diagnose nerve injuries and identify those that need referral to a specialist. These audit standards have been distilled from the recent BOA blue book on peripheral nerve injury which provides evidence-based guidelines for management.

ed at all”.

BOLAM, BOLTHIO

- Bolam- what is the state of the body of knowledge?
- did the diagnosis have a ‘logical basis’
- was the decision not to treat a ‘logical decision’
- or was it illogical indefensible and irresponsible
- many are!

RES IPSA LOQUTIUR

- Erbs palsy may be moving towards this position now. (Importantly though it is sustained as a more minor injury than a CP injury.)
- Often not consented for even in macrocosmic babies.

PAINFUL PALSY

- If there is a post operative palsy (paralysis of a limb) with neuropathic pain in that distribution then there cannot be a process of watching - **There has to be an operation** to correct the pathology.

FAILURE TO RECOGNISE INJURY

- not identifying structures at risk- 'mini open'
- not assessing potential damage post op -Spinal accessory XI nerve -with Lymph node biopsy
- There is a burden on any surgeon to recognise post op damage to any nerve at risk.

TIME IS MUSCLE

- There is a 2% drop in final outcome of muscle function per week from injury.
- at 1 year there is little chance of renerivating muscle.
- the old approach was a watch and wait .
- we are now (on a strong evidence base) much more interventional in seeking a diagnosis and instituting treatment.

TIME IS MUSCLE

- Delay in referral has a quantifiable material impact.
- Outcomes are predicated by time from injury to treatment.

PAIN AND CRPS

- failing to identify the heterogeneity of the injury
- pain should again be identified and diagnosed
CRPS is not a diagnosis it is set of symptoms some of which are surgically treatable (neurostenalgia, post traumatic symptomatic neuroma, neuritis, causalgia)

PAIN POST LAPROSCOPY

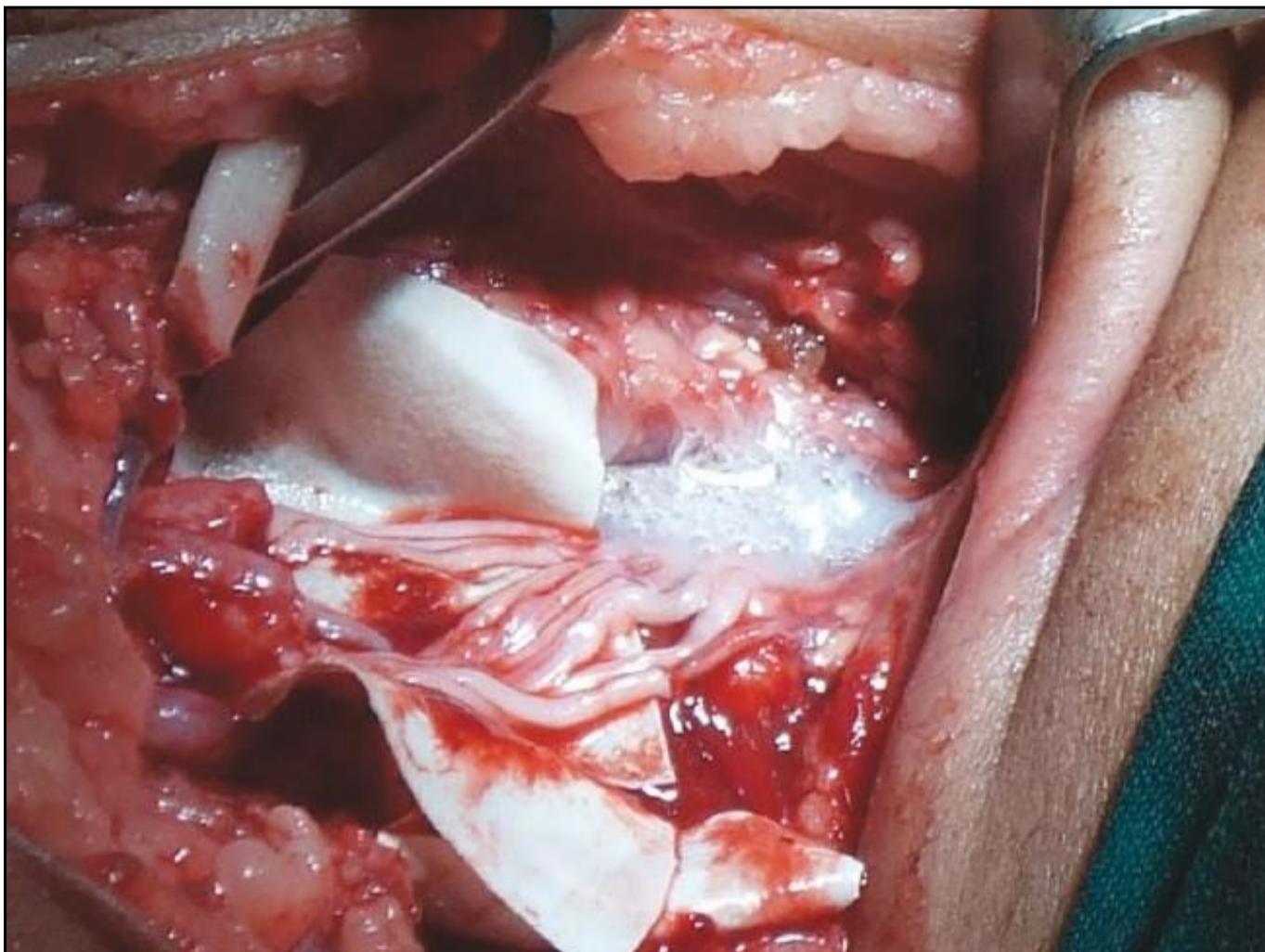
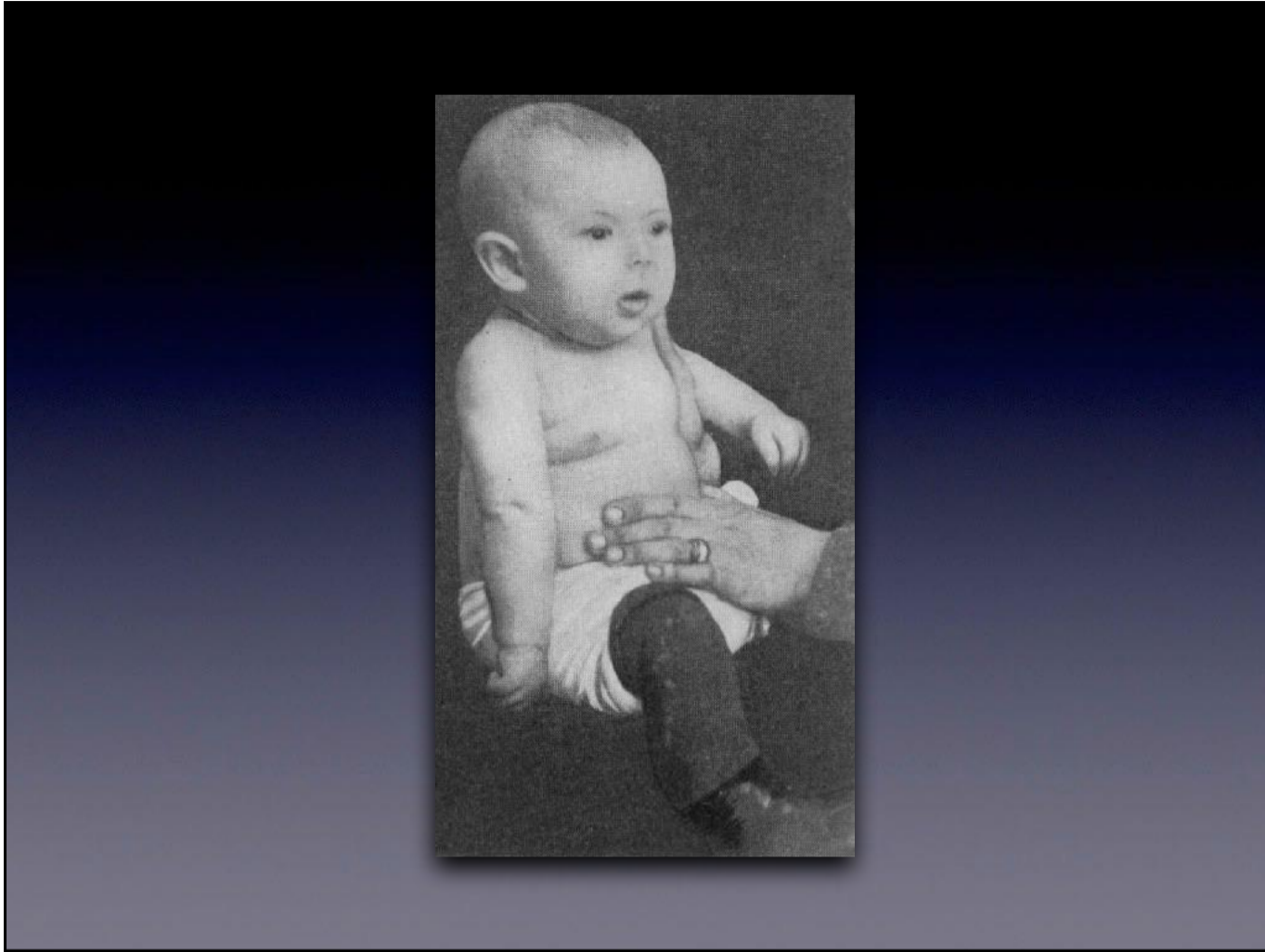
31 yo Female
treated for endometriosis



BIRTH BRACHIAL PLEXUS Palsy

4 year old girl
left sided OBPP







SUMMARY

- There are clear and common sense guidelines.
- They are often not adhered to.
- In elective care and emergency care.
- There is very often significant delay that produce material loss.

SUMMARY

- Nerve injury Surgeons can very quickly throw light on the case
- they can often (if early in the disease) offer your client an improvement on their clinical condition and prognosis.

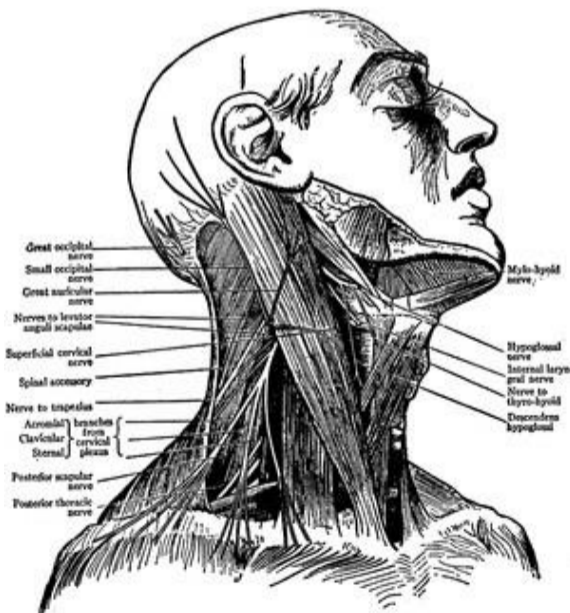
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