Post Herpetic Neuralgia

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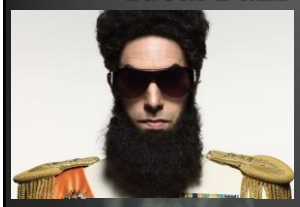
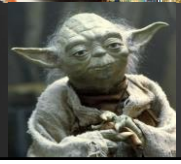
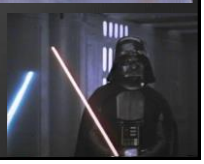
Disclaimer

- Paid presentations for various medical companies
- Not a share holder

Ideal Pain Specialist



Some depressing facts

- $140.2B spent 2011-12 (9.5%GDP). $82.9B spent 2001-02 (8.4%GDP)
- 40% of chronic pain is post operative and Iatrogenic
- 40% of patients presenting to chronic pain departments have personality disorder
- 20% of population has chronic pain
- >6 Billion spent per annum on chronic pain
- Aberrant Behavior not uncommon (5-24% in LBP)
- Up to 10% of population has personality disorder
- Up to 3% of population has Borderline personality disorder
- 1 Billion people in the world are obese
- By 2050 proportion of people over 80 will more than double

IASP
MBF Foundation 2007
Pain .Cimical update JAN2011
Martell 2007. Ann Intern Med
Sansone & Sansone Innov Clinical Neuroscience 20012
Australian institute of Health and welfare 2013
WHO

Some depressing people in charge

Key points before falling asleep

- PHN is becoming less common with increase in vaccination, use of Antivirals and earlier interventions and diagnosis
- It mainly affects the elderly and the immunosuppressed
- The main analgesic strategy is Anti-neuropathic medication
- Occasionally need to use invasive procedures
- It can be very debilitating
- Early detection of Shingles and the use of anti-virals is the key element of therapy

Background
Varicella Zoster Virus

- Varicella zoster Virus , Herpes Zoster type 3 , dsDNA (VZV)
- 95% of individuals over 50 are seropositive for VZV
- VZV- cell mediated immunity reduces with age
- Life time risk of Shingles is 25%
- 50% for individuals over 80
- Three phases of Shingles:
  - Acute: Pain for a months
  - Sub-acute: 30-90days after rash
  - Post herpetic Neuralgia : Pain more than 90 days or more
- 1% Hospitalized, Death rate 0.2/100,000

Johnson et al 2015
Sundstrom et al 2015

Incidence

- 10.9/1000 person years for VZV (Mainly Female)
- 2.1/1000 person year PHN (No male : female differences)

Yukiki et al 2015

Pathophysiology

- The Virus remains in the DRG
- As Cell mediated immunity drops the virus replicates
- Spread along the peripheral nerves
- PHN occurs due to sensitization and de-afferntation
- Inflammatory neural damage
  - Increase in sodium channels
  - Increase in TRPV1
  - Loss of GABA in DRG
  - Release of Substance P, Bradykinin, Histamine Cytokines, K+, H+
  - Increase in ectopic discharge of c-fibers

Young Hoon Keon 2015

Clinical findings

- Allodynia
- Hyperalgesia
- Ongoing rash
- Burning sensation
- Commonly T7 , V1
- Prodromal symptoms

Young Hoon Keon 2015

Post herpetic neuralgia 2%

- Pain can last for several months
- Risk factors include:
  - Older age
  - Greater rash
  - Immuno-compromised
  - Female
  - Diabetes
  - Herpes Zoster Ophthalmicus (HZO)

Johnson et al 2015
Sundstrom et al 2015

HZO 4%

- Can occur without rash
- Can be in cornea and tears
- Up to 70% develop complications
- Anti-Vira therapy doesn't't always work
- Worse trialing even after 72 hour of onset

Johnson et al 2015

Other complications

- Encephalitis
- Pneumonia
- Hepatitis
- Death in immune compromise
- Coagulopathies

Johnson et al 2015

Cost

- 2010: 1.05 Million Euro
- Half of total cost primary health care

Johnson et al 2015
Sundstrom et al 2015

Treatment options

- Anti-viral and analgesics
  - Valciclovir and famciclovir
  - TCA
  - Gabanoids
  - Lignocaine patch
  - Capsaicin
  - Tramadol
  - Topantadol
  - Buprenorphine
  - Targin/ Oxycodone

Johnson et al 2015

Anti-Virals

- Acyclovir, Famcyclovir, Valacyclovir
  - Block Viral DNA Polymerase
  - Famcyclovir and Valacyclovir has better oral absorption
- Within 72 hours of skin eruptions
- Can be used beyond (Good risk / benefit) especially for severe pain , late rash, non-truncal involvement

Yukiki et al 2015

Corticosteroids & analgesics

- May help Shingles but not PHN
- NSAIDS combined with paracetamol and opioids can be helpful
- TCA are useful , can trial Nortriptyline 10-25mg at night as an adjuvant
- Capsaicin cream once per day
- Lignocaine 5% patch 122-18 hours per day
- Gabanoids such as Gabapentin and Pregabalin can be very useful
  - Start with 25mg Pregabalin 12 hourly first

Yukiki et al 2015

Invasive interventions Epidural /Sympathectomy

- Epidural steroid and local Anaesthetic
  - Useful when done under 8 weeks form onset of symptoms
  - Need larger volumes of local Anaesthetic (10-20ml)
  - Can be combined with paravertebral
  - Need to get as much drugs around DRG as possible
  - Can add clonidine to the admixture
- Sympathetic block
  - Stelate Ganglion Block used for HZO
  - Lumbar and Thoracic paravertebral approach for upper and lower limb
  - Results are better when early intervention

Yukiki et al 2015

Invasive intervention Spinal cord stimulation

- Last resort for severe refractory cases
- Trials of SCS can be considered
- Trails of DRG stimulation version can be helpful

Yukiki et al 2015

Practical approach

- Rule out red flag source of Immunosuppression
- Commence 1-2 courses of anti-virals
- Combine
  - 10mg Nortriptyline at night
  - 25mg 12hourly Lyrica (Titrate to 75mg 12hourly)
  - Celecoxib 200mg once per day
  - Either Tramadol 50mg 4 hourly as required or Topantadol 50mg 12 hourly (Titrate to 150mg 12hourly)
  - Clonidine 50mcg at night if needed for poor sleep
- Reserve Benzodiazepine, more potent opioids , Capsaicin , and lignocaine Patch for 2nd and 3rd line therapy
- Refer at 4 weeks if not winning so that Invasive procedures can be considered with some success.

Some happy things