Ouch!!! That’s Better: Interventional Pain Options

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Conflict of Interest Disclosure

• Author’s conflicts of interest:
  • Dr. Baule has no conflict of interest

Objective 1:
At the conclusion of the presentation, the learner will be able to provide examples of treatment interventions for cervical, thoracic, and lumbar pain.
Objective 2:
After participating in the presentation, the participant will be able to provide examples of treatment options for cancer pain.

Objective 3:
At the conclusion of the presentation, the learner will be able to identify two intraoperative procedures for pain control.

Types of Spinal Pain
- Cervical
- Thoracic
- Lumbar

Spinal Pain Interventions

- Epidural injection
- Selective nerve root block
- Radiofrequency (RF) nerve ablation
- Sacroiliac joint (SI) joint injection

Image from Spine Center of the Emerald Coast; Retrieved from http://www.emeraldcoastspine.com/transforaminalinjection.html

Image from Los Angeles Minimally Invasive Spine Institute; Retrieved from https://www.lamisinstitute.com/procedures/spinal-injections/sacroiliac-joint-injection-los-angeles
Treating Cancer Pain
Cancer Pain Treatments

- Head, neck and cervical spine
- Maxillary and mandibular nerve blocks

Cancer Treatment, Cont.

- Abdominal cancer
- Celiac plexus
More Cancer Options

- Splanchnic nerve
- Associated pelvic and perineal visceral pain

Treatment of Metastatic Spine Disease

- Stereotactic body radiation therapy (SBRT)
- Percutaneous tumor ablation
Nerve Blocks

Three Step Process for Nerve Blocks

- Diagnostic blocks
- Prognostic blocks
- Therapeutic blocks
Types of Nerve Blocks

- Trigeminal
- Sphenopalatine ganglion
- Glossopharyngeal
- Occipital
- Vagal
- Cervical plexus

Trigeminal

[Image: Trigeminal Nerve diagram]

Neuroablation

[Image: RF electrode insertion]

Image retrieved from https://www.moddb.com/members/snehadiva82/videos/radiofrequency-neuroablation
A sympathetic nerve block is one that is performed to determine if there is damage to the sympathetic nerve chain.
Stellate Ganglion Block

- A type of sympathetic nerve block performed to determine if there is damage to the sympathetic nerve chain supplying the head, neck, chest, or arms and if it is the source of pain in those areas.

Genicular Nerve Block
Surgical Interventions

- Intrathecal Pain Delivery System
- Spinal Cord Stimulator
- Kyphoplasty/vertebroplasty/sacroplasty
Reasons for Intrathecal Pumps

- If one is dependent on pain medication
- If one could not benefit from additional surgeries
- Cancer pains
- Lessen spasticity from cerebral palsy or multiple sclerosis


Is The Pump For You?

- Must go through complex trial to see if treatment decreases pain/spasticity
- Single injection through lumbar puncture
- Multiple injections over the course of days
- Continuous trial—catheter placed in correct area of the spine connected to external pump

Spinal Cord Stimulator

Click a number below for more information:
1. Pain Signals
2. Electric Impulses
3. Muscles
4. Healing motions (paralysis to begin)
But Wait
There's More!!!

Minimally Invasive Spine Procedures
- MILD®
- Endoscopic foraminotomy
MILD®

Endoscopic Foraminotomy

Kyphoplasty

Images from Atlantic Spine Center Video; Retrieved from https://www.youtube.com/watch?v=v1RwKwRDNPM

Image from DrOsborn.com; Retrieved from https://www.drbrettosborn.com/neurological/kyphoplasty
**Trauma**

- Rib fixations
- Bupivacaine liposomal injection suspension (EXPAREL®) – slow release local anesthetic
- OnQ® Pump

**OnQ® Pump**


**Transversus Abdominis Plane (TAP) Block**

- Places local anesthetic in the lateral abdominal wall in a plane between the internal oblique and the transverse abdominis muscles
- Can block many of the abdominal nerves as they pass to the abdominal structures
Wrap Up

• Explained interventions for spinal pain
• Provided an overview of interventions for cancer pain
• Provided several intraoperative procedures for pain control

Thank You for Your Attention
Questions

Dr. Nick Riviera; Retrieved from
http://simpsons.wikia.com/wiki/Nick_Riviera