Myelography Gary Comtois Biomedical Engineering Seminar II October 27, 2003

Myelography is the technique of observing and analyzing the spinal cord by using radiopaque dyes (contrast agents). These dyes get injected into the spinal cord at "tap" sites, specifically around the dura mater of the CSF (cerebrospinal fluid) region and subarachnoid space. The dyes used are usually composed of iodine or barium because these elements are opaque to an Xray.



From the X-ray, any abnormalities in the spinal cord can be visualized and examined in order for proper treatment to be applied. A myelogram would be performed once pain, weakness, or numbness is experienced in the spine.

One example of a spine abnormality is a Slipped Disc. The spine consists of disc cushions between each of the thirty-one vertebrae segments. When a disc is moved from its original position it will pinch a nerve and is said to be "slipped." This abnormality usually occurs in the lumbar region of the spine, but can occur in the cervical and thoracic regions as well. Slipped discs are the result of a sudden injury or even a gradual erosion of the disc itself.



This picture depicts a herniated disc.

The location of tumors within the spinal region can also be facilitated with myelography.

The procedure itself consists of the injection of radiopaque dyes via a needle. The dye is allowed to move uniformly throughout the spine. This procedure can last from twenty to sixty minutes, an hour long CT scan, as well as a four-hour rest period.

## References

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