



ARC (ARACHNOIDITIS) NEWSLETTER

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A Non-Profit Organization created for the Study of the Causes, the Diagnosis and the treatment of ARACHNOIDITIS

A new year has begun and though there is a certain degree of uncertainty in the international sphere we look forward to a better atmosphere in the immediate future. Major advances in clinical studies and experimental research have continued. Two important publications related to the diagnosis and prevention of arachnoiditis have appeared in the first two months of 2003. The following Abstracts and reference to the publications names, dates, volumes and pages are for all of the interested readers to look up if they want; herein are the condensed abstracts with some commentaries.

INFORMATION FRONT

NEUROLOGIC DEFICITS AND ARACHNOIDITIS FOLOWING NEUROAXIAL ANESTHESIA

Of late, regional anesthesia has enjoyed unprecedented popularity; this increase in cases has brought a higher frequency of instances of neurological deficit and arachnoiditis that may appear as transient nerve root irritation, cauda equina, and conus medullaris syndromes, and later as radiculitis, clumped nerve roots, fibrosis, scarring, dural sac deformities, pachymeningitis, pseudomeningocele, and syringomyelia, etc, all associated with arachnoiditis. Arachnoiditis may be caused by infections, myelograms (mostly from oil-based dyes), and blood in the intrathecal space, neuroirritant, neurotoxic and/or neurolytic substances, surgical interventions in the spine, intrathecal corticosteroids, and trauma.

Regarding regional anesthesia in the neuroaxis, arachnoiditis has resulted form epidural abscesses, traumatic punctures (blood), local anesthetics, detergents, antiseptics or other substances unintentionally injected into the spinal canal.

Direct trauma to nerve roots or the spinal cord may be manifested as paraesthesia that has not been considered an injurious event; however it usually implies dural penetration, as there are no nerve roots in the epidural space posteriorly. Sudden severe headache while or shortly after an epidural block using the loss of resistance to air approach usually suggests pneumocephalus from an intradural injection of air. Burning severe pain in the lower back and lower extremities, dysesthesia and numbness not following the usual dermatome distribution, along with bladder, bowel and/or sexual dysfunction, are the most common symptoms of direct trauma to the spinal cord. Such patients should be subjected to a neurological examination followed by an MRI of the effected area. Further spinal procedures are best avoided and the prompt administration of IV corticosteroids and NSAIDs need to be considered in the hope of preventing the inflammatory response from evolving in the proliferative phase of arachnoiditis.

Acta Anaesthesiol Scand 2003; 47:3-12.

Essentially what this article describes are the possible complications derived from either spinal or epidural anesthesia that may cause Arachnoiditis (citing some but not all the many articles in the medical literature because of limited space) also identifies the medications that under certain circumstances may irritate and damage nerve roots and spinal cord. An attempt to define the incidence of ARC is frustrating because various authors have used different nomenclature, furthermore, the fear of litigation or professional out casting keep many physicians from mentioning their occurrence. Warning signs have been identified such as paraesthesia (electric shock-like sensation while manipulating the needle), blood in the cerebrospinal fluid (indicating trauma to a vessel) and multiple attempts because of technical difficulties are ominous signs. Emphasis was given to the need to stop the procedure if any of these red flags occur, then follow these patients closely if any of these events took place requesting promptly a Neurology consultation and an MRI if there is burning pain, numbness, bladder or bowel dysfunction, so an accurate and immediate diagnosis can be made and treatment instituted in the early stage of the disease. The article includes 5 radiological images of different types of lesions and lists 124 references from the medical literature. Many compliments have been received as for the clear presentation and objective discussion of the theme. Hopefully, Anesthesiology specialists are becoming aware of this potentially disastrous complication.

EPIDURAL INJECTIONS OF INDOMETHACIN FOR POSTLAMINECTOMY SYNDROME; A PRELIMINARY REPORT.

Epidural Injections of Indomethacin for Postlaminectomy syndrome: A Preliminary report.

Since there have been side effects reported with the administration of corticosteroids epidurally, their application has been limited. Because some nonsteroidal anti-inflammatory drugs have central and spinal antinociceptive actions, we have compared the effects of indomethacin (INM) given by the epidural route to methylprednisolone (MTP). This was a prospective, comparative study in an ambulatory pain care center. Two hundred six patients with recurrent low back pain (Visual Analogue Scale >7) and radiculopathy after they have had 2 or more lumbar laminectomies with the diagnosis of "postlaminectomy syndrome" were randomly assigned to 1 of 3 groups. Group I (64 patients) was given 2 epidural injections of lyophilized INM 1 mg. Group II (60 patients) received 2 injections of 2 mg of INM at the same intervals. Group III (82 patients) was treated by 2 epidural injections of MTP 80 mg. In every case, the medication was diluted in 3 ml of 0.5% bupivacaine. Reductions of pain were assessed by changes in the Visual Analogue Scale; physical activities, attitude and medication intake were graded by the Pain Progress Score recorded before each treatment and 2 weeks after 1st. After each injection, all patients had pain relief to Visual Analogue Scale <3. Increased analgesia ($P < 0.05$) was noted when a double dose of INM was used (Group II) or when 80 mg of MTP was given. The total average scores of the Pain Progress Score showed significant differences at the second injection in Groups II and III only. Physical activity, emotional attitudes, and medication intake were also improved but the changes were not statistically significant. In conclusion, in this group of patients, INM produced adequate analgesia in Groups I and II; with evidence suggesting that 2 mg of INM may produce similar degree of pain relief as 80 mg of MTP after the second injection. Other nonsteroidal anti-inflammatory drugs may be explored in the future for the same purpose.

Anesth Analg 2003;96:463-8

This initial comparative, randomized study included patients with low back pain and radiculopathy (sciatica type) noted after a spinal operation (laminectomy). It compared the effects from epidural injections of either methylprednisolone (Depomedrol) or indomethacin a non-steroidal anti-

inflammatory called Indocin. It was performed in a relatively similar type of patients, having equivalent intensity of pain and taking similar regimen of medications and evaluated the beneficial effects noted after an epidural injection of each medication, up to 14 days, from either 80mg of Depomedrol or 2mg of Indocin were similar. The difference though, is that indocin comes in a lyophilized powder that can be diluted with **preservative free normal saline solution** or local anesthetics, has no preservatives. All parenteral steroid preparations sold in the USA have at least one or more preservatives (see the table located at <http://www.arachnoiditis.com/newsletter/tbl.htm>, or click on the link located on the treatment or archive page of the web site) with polyethylene glycol, benzilic alcohol or benzalkonium been the most common. They have been incriminated as the culprit in the development of arachnoiditis if the injection is made incidentally and unintentionally inside of the dural sac, in the subarachnoid space, where the cerebrospinal fluid is contained. Two studies done in animals have failed to show any neurotoxicity. The significance of this paper is that the benefits of anti-inflammatory medication can be obtained without the dangers of the concomitant administration of preservatives. Besides it also avoids the side effects from steroid therapy such as fluid retention, moon face, skin fragility, hair loss etc. This same medication may be used for injections into muscle, joints and trigger points. Further studies need to be done to confirm these early observations, with this medication that has been used for decades to treat an abnormal vascular communication in the heart of newborn babies, there seems to be an alternative to what has been in the past a helpful but risky medication.

RESEARCH

You may wonder why such big letters on this title, the reason being that by conducting observations whether in vitro in the laboratory, in animals or in patients under the appropriate protection guidelines, is one sure way to learn more about this puzzling disease. The studies conducted in rats at the CAMINA PROJECT (an institution dedicated to the study of traumatic injuries to the spinal cord) in Mexico City are continuing, though we hope to have a more definite results in our next NEWS LETTER, I can tell you that thus far it has been found that there are some differences in the lesions produced by injections of irritant substances such as phenol, kaolin ,etc. as compared to those produced by laminectomies alone confirming what we have seen in MRIs (clumped nerve roots, adherence to dural sac and damage to the meninges) noted in MRI's, CAT scans or myelograms in patients. Drs. Gabriel Guizar, Socorro Romero and Angelina Martinez are doing a great job. An up to date review will be featured in the next ARC NEWSLETTER on this precise topic.

We also have continued our observations using propranolol and acetazolamide in patients that had acquired arachnoiditis from surgical intervention in the spine, especially those that would have lesions that would interfere with the normal circulation of the cerebrospinal fluid. Thus far the effects appear to be beneficial in obtaining relief of the pressure sensation experienced by some of these patients. This will have to be a long term, double-crossed study in order to determine if there are positive effects.

For those skeptics that doubt whatever impact our modest contribution has had in the appreciation by both the general public and the medical profession, I would like to share with our readers for most encouraging reviews that have appeared in medical peer reviewed journals in different parts in the world. The usual mechanism for these reviews is the book is sent by the author(s) or by the publishing company to the Editor. At his/her discretion, the Editor sends the book to a colleague within its Editorial Board who may be knowledgeable on that particular subject. The reviewer then reads the book and writes his opinions as far as how the book was written, the illustrations, considering if it reaches its objections and what readership would best be served by it. Believe me,

these reviewers miss no words, if there is reason for criticism. To read these reviews, click on 'Book Reviews' from our site's main pages, or go to <http://www.arachnoiditis.com/reviews.asp>.

NEW SECTION

We have been approached by arachnoiditis sufferers and family members who feel isolated and would like to talk with other patients under similar circumstances and exchange experiences.

Therefore, we would like to provide an opportunity for them to post their E-mail addresses in our newsletter and ask other ARC sufferers to contact them.

If you like to have your E-mail address posted, contact us at taldrete@arachnoiditis.com

OUT REACH

Candy Wilson in the Florida area would like to be contacted by other arachnoiditis sufferers.

Her e-mail address is: aircom_1@msn.com

CALL FOR LETTERS, ARTICLES, CONFESSIONS POEMS, DEBATES, etc.

Readers are invited to write short, but meaningful, articles on any subject related to Arachnoiditis. They may be submitted with the author's name or anonymously, however, with the understanding that:

- a. The Editorial Board reserves the right to modify them or alter them to conform to the style and the "Objectives" of the ARC Newsletter.*
- b. The copyrights will be waived with the assurances that the Editorial Board will not derive any profit from any of these publications.*
- c. They are simple, constructive and civil.*

Thank you.

The Editorial Board

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