myelography about 450,000 myelograms were being performed in the United States on a yearly basis (at least an equal number elsewhere in the world). Starting in the 1940’s medical publications of the period began to identify associated neurotoxicity of the subarachnoid space including severe scarring and nerve tissue destruction.

None of the oil myelographic substances were ever "officially" acknowledged to be toxic. In regard to iophendylate the fact that it dissolved rubber, linoleum and ever inert styrofoam when in contact with it didn't seem to bother anyone. It continued to be injected into the subarachnoid space throughout the world. Oil myelography continued in the United States until about 1980 when it "fell into disuse". Oil myelography was gradually replaced by water soluble contrast agent myelography and, in recent years, by non-invasive CT and MRI imaging. Because the incidence and prevalence of the neurotoxic complications of these oil myelograms were never officially studied it is simply not known how many patients developed severe incapacitation and disability directly related to the introduction of this material into the subarachnoid space. One thing, however, is crystal clear, of the at least 5 million patients who underwent oil myelography in the United States during the 20th century not a single case involved informed consent on the part of the patient.

Epidural Steroids

The "epidural" space is separated from the subarachnoid space only by the thin dura mater membrane and its associated filamentous pia mater. Epidural steroid administration is an empiric therapeutic modality commonly performed for the treatment of low back disorders. If the steroid is inadvertently injected into the subarachnoid space rather than the epidural space serious disability and incapacitation can result. Although all foreign body substances introduced into the subarachnoid space are "irritating" others can be highly neurotoxic. The most significant example of such neurotoxic agents are those containing ethylene glycols to allow for slow release (i.e. Depo-Medrol®, Depo-Medrone®, Aristocort® and Methylprednisolone Suspension®). When introduced into the subarachnoid space these materials can be highly neurotoxic and productive of a potentially disabling condition referred to as adhesive arachnoiditis. Since none of these steroids is approved, by their manufacturers, for epidural injection, and that they are clearly know to be toxic if misinjected, it is interesting to note that they still appear to be used by the majority of physicians now performing epidural steroid injections.

A prudent individual would assume that the medical leaders in performing, teaching, and publishing on epidural steroids would be acutely cognizant of the most potentially serious patient complication of "epidural" steroid administration. The facts suggest otherwise. A prominent medical publisher, publishing 16 spine-related patient manuals including "Lumbar Epidural Injection" and "Cervical Epidural Injection" has, under the section on "risks and complications", made no mention of adhesive arachnoiditis, the most serious potential complication of epidural steroid administration. This is despite the fact that new cases of incapacitating adhesive arachnoiditis directly related to inadvertent subarachnoid administration of neurotoxic steroids are being diagnosed by spine specialists on a continuing basis.

Are there alternatives to potentially neurotoxic formulations of methyl-prednisolone for epidural administration? Indeed there are. Why are they not used? The best answer is colossal ignorance, indifference, or worse. Methyl prednisolone "suspensions" have neither "fallen into disuse" nor have they been officially identified as being a serious potential risk to the public health in any country at this time. What does this revelation mean in regard to informed consent? Might reading this make a patient inquire, from a physician, just which drugs will be injected into their epidural space? Will physicians because of these questions from informed patients begin to modify their practice? We certainly hope so. It is sad to observe that once again, the public may be forced to call upon the good offices of the legal profession to help in promoting awareness of this clear and present danger because of failure by their physicians and elected officials to become involved.