having the inexperienced intern or the
doctor who refers the patient to the
surgeon administer the anesthesia?  
God forbid!  The best solution to
the problem then is to encourage the train-
ing of the nurse anesthetist until there
are enough physician anesthesiologists
to fill the demand.  There has been
no opposition, as far as I know, to the
idea of the laboratory or x-ray tech-
tician.  Why should there be opposition
to the nurse anesthetist technician?  In
the larger hospitals she should be
under the direction of an anesthesi-
ologist who holds the M.D. degree and
has spent several years in graduate
training in his field.  But in the
smaller hospitals, or in those in which
a physician anesthesiologist is not avail-
able, she will prove invaluable.
There is no doubt that already she has
saved the lives of thousands who would
have died if they had been subjected
to the kind of anesthesia which the
unskilled physician gives.  The posses-
sion of the M.D. degree by itself cer-
tainly does not qualify one in a pro-
essional sense to administer an anes-
thetic drug safely.'  5 references.

F.  A.  M.

McCarthy, K. C.: War Advances An-
esthesia.  Ohio State M. J. 42: 1150–
1153 (Nov.) 1946.

Although war is the greatest calamity
that befalls mankind, there has been
an associated remarkable increase in
medical knowledge during most wars.
The professional status has been mark-
edly advanced.  The supply of quali-
\[...\]
must be publicized and used in daily practice. 4 references.

F. A. M.


Some neurologic complications follow spinal anesthesia while others are more frequent after general anesthesia. Headache, septic and aseptic meningitis, arachnoiditis, neuritis, myelitis and the cauda equina syndrome have been the complications most frequently reported following spinal anesthesia. The cauda equina syndrome is usually brought to the anesthesiologist’s attention when the patient fails to regain the use of his lower extremities at the usual time after spinal anesthesia. Loss of motor and sensory function is usually found to involve the lumbar-sacral nerve distribution. Loss of bladder and bowel function is the most ominous part of the clinical picture and return of function, if it occurs, is slow.

The cause of each of the neurologic complications which follow spinal anesthesia in man is difficult to determine. When the cat or dog is the subject of experiments, there seems to be little doubt that the toxicity lies within the spinal anesthetic agent itself.

The clinical manifestations of the lesion of the cauda equina might be explained by damage to the lumbo-sacral region of the cord, to the conus medullaris or to the nerves of the cauda equina. In most cases the damage has occurred immediately following the operation under spinal anesthesia. Direct trauma seems unlikely as the sole cause of the damage. There seems to be a definite relationship, however, between the traumatic spinal puncture which causes pain to radiate down the leg and which is combined with the injection of a spinal anesthetic drug, and a permanent neurologic complication. The rapid onset of symptoms, lack of symptoms or signs of an inflammatory process, and failure to culture organisms from the spinal fluid in these cases seem to preclude infection as the etiologic factor. In animals the nerves exposed to the greatest concentration of the anesthetic drug are most affected. Another possibility in the etiology of these complications is that the spinal anesthetic may act as a precipitating factor in the evolution of preexisting neurologic affections such as, pernicious anemia with combined sclerosis, multiple sclerosis, tabes, general paresis, toxic psychosis, metastatic carcinoma with impending spinal fluid blockage.

Reports from the literature show a great variation in the incidence of these complications. Thirteen cases in which neurologic complications followed spinal anesthesia have been obtained from the records of the Lahey Clinic and from records of other sources outside the Lahey Clinic.

To prevent postspinal neurologic complications the apparatus used in the administration of spinal anesthesia should be carefully cleaned and sterilized. Rinsing of syringes and needles with sterile isotonic solution of sodium chloride is an additional precaution. Drugs should be used from manufacturers’ ampules. The labels should be legible, the contents clear and free from particles and the ampules should be intact. Ampules should be sterilized by immersing in a non-irritating, colored solution such as 1 to 1,000 Zephran. Spinal puncture should not be made through or near infected areas. Spinal anesthesia should not be given to patients with known spinal cord disease or with known virus infections. Delayed return of motor function or severe paresthesias following a previous spinal anesthetic should be considered a contraindication to spinal anesthesia.