pneumococcic pneumonias were essentially similar to primary pneumococcic pneumonia except that (1) the pulmonary lesion was more often atypical (bronchopneumonia), (2) the distribution of pneumococcus types tended to simulate that found in healthy carriers, (3) antecedent infections of the respiratory tract were less frequent and (4) the acute febrile stage of the disease tended to be shorter. The post-traumatic pneumococcic pneumonias resembled primary pneumonias more closely than did the postoperative pneumonias. Modern specific therapy, including type specific serums and effective chemicals, notably sulfapyridine and sulfathiazole, was as effective in post-traumatic pneumonias as in primary pneumococcic pneumonias, and these agents were also highly effective in the cases of postoperative pneumonia. In the present series, specific serums and sulfapyridine were about equally effective. Infections of the respiratory tract complicating surgical operations or severe trauma should be treated in the same manner as any acute pulmonary infection. Pneumococcus typing should be done and cultures of sputum or of material from the throat and blood cultures taken as soon as a diagnosis of pneumonia is suspected. Chemotherapy with sulfapyridine or sulfathiazole given orally, or their sodium salts given intravenously if necessary, should be instituted, under proper control, as soon as evidence of pneumonia appears. Specific antipneumococcus serum may be given as soon as it is evident that the drug is not effective or not properly tolerated." 27 references.

J. C. M. C.

BARRIE, H. J.: *Meningitis Following Spinal Anaesthesia: Report of Eleven Cases.* Lancet 1: 242–243 (Feb. 22) 1941.

"In July, August and September, 1940, 11 cases of meningitis occurred among the 96 patients who were operated on under spinal anesthesia in one theatre of the Royal Hospital, Sheffield, during that period. The clinical signs and pathological findings resembled each other. One case was fatal and an autopsy was obtained. No particular age-group was affected. The operations were with three exceptions clean ones, such as repairs of herniae and fractures. The fatal case was a colostomy for inoperable carcinoma of the colon. The spinal anesthetics used were from different batches of light Percaine. . . . In 9 of the patients there was a rise of temperature to 100 F. or over within the first three days after operation. There were no noticeable symptoms of meningeal irritation at this stage. All of them complained of abrupt onset of severe headache between the seventh and tenth days after operation and in most this was associated with drowsiness, irritability, photophobia, neck rigidity and a positive Kernig's sign. Blood counts when done showed a polymorphonuclear leucocytosis. All cases, except the fatal one, were free from temperature and symptoms by the eighteenth day after operation; 9 when examined four weeks after had no residual signs or symptoms apart from slight lateral nystagmus. In the fatal case the patient became comatose and died within seven days of the onset of symptoms.

"Lumbar puncture was done in 6 cases. The fluid was clear or faintly turbid. The protein averaged 100 mg. per 100 c.cm. with the highest reading 160 mg. and the lowest 60 mg. Chlorides averaged 660 mg. per 100 c.cm.; highest 720 mg., lowest 640 mg. Cells averaged 450 per c.mm.; highest 1100, lowest 9. There was either slight preponderance of lymphocytes or polymorphs, and in the average they equalled each other. There was no change in the gold curves except for one mild meningeal reaction. No tubercle bacilli or other organisms were

seen in films. In 2 cases a second lumbar puncture within two days showed an increase of protein and fall in the number of cells. . . .

"A review of the circumstantial evidence pointed to a cold water filter as being a possible source of infection. This filter was a Berkefeld multiple candle type and was connected directly to the roof water tanks. The outflow water, assumed to be sterile, was used to rinse the lumbar puncture needles which were kept in formaldehyde vapor. . . . In view of these findings the use of the filter was promptly discontinued, after which no further cases of meningitis occurred. Thus, although circumstantial evidence strongly suggests the contaminated water as the source of infection, direct proof of this has not been obtained."

J. C. M. C.

CAMERON, W. M., AND KASANIN, J.: *A Pharmacologic and Clinical Re-evaluation of Amphetamine (Benzedrine) Sulfate.* New England J. Med. **224**: 544–550 (Mar. 27) 1941.

"The molecular configuration of amphetamine (Benzedrine) places it in the group of phenyl amines, another member of which is ephedrine. None of the phenyl amines is truly sympathomimetic in their effects. Amphetamine is not sympathicotropic in its mode and locus of operation, and consequently should not be equated with epinephrine. Amphetamine is relatively feeble in potency in comparison with other aromatic amines, such as epinephrine, arterenol and tyramine. It is clearly established that increased length of the side chain and the absence of OH-groups are associated with increased toxicity. By these criteria amphetamine must be suspected of relatively high toxicity, which can be ruled out only by further pharmacologic experimentation. Because the toxicity of amphetamine has not been sufficiently determined and its action is relatively feeble, it seems preferable to employ other amines for peripheral effects on the cardiovascular, gastro-intestinal and other systems.

"Clinically, amphetamine is valuable in certain diseases of the central nervous system, such as narcolepsy and postencephalitic parkinsonism, and in certain intoxications. The administration of the drug in neuroses, depressions and schizophrenia seems of doubtful value, and may occasionally be harmful. Favorable results reported in such heterogeneous states as orthostatic hypotension, chronic alcoholism, obesity, and schizophrenia do not speak for specificity of action, but indicate rather that other variables (present in every therapeutic situation) may have contributed to the ultimate improvement of the patients." 67 references.

J. C. M. C.

LIVINGSTONE, H.; HEIDRICK, F.; HOLICKY, I., AND DACK, G. M.: *Cross-infections from Anesthetic Face Masks.* Surgery **9**: 433–435 (March) 1941.

"We wish to report the results of guinea pig inoculations of saline washings of anesthetic masks removed from patients having active pulmonary tuberculosis. Specimens were taken as follows: (A) After removal of the mask from the face; (B) after washing the mask with water, as is the custom in many institutions; (C) after washing the mask as in (B) and then immersing it for one hour in the following solution:

Formaldehyde (38 per cent solution)	210 cc.
Aqua	606 cc.
Alcohol 95 per cent q.s. ad	4,000 cc.

This solution was made by one of us (G. M. D.) after bacteriologic investigation to determine the lowest percentage of formalin necessary to destroy the tubercle bacilli in less than one hour. . . .

"In the 39 anesthetic face masks examined 13, or 33.3 per cent, contained