

Case Reports

TWO CASES OF MENINGITIS (Meningococcal and Pneumococcal)

(Presented with the permission of the staff of the St. John General Hospital)

CASE I

Mr. H., white, male, 34 years of age.

Patient was admitted to Hospital June 24th, 1939, for diagnosis.

Complaints: Headache, occasional pain in left side of body.

History Present Illness: Took sick three days previous to admission, with aches in back of legs and neck, and general malaise. Raised a good deal of whitish and yellowish sputum and had a dry cough. Head cold, accompanied by severe headache and pain radiating down neck. Vomiting intermittently. Constipated.

Personal History: Essentially negative except for fracture of spine, pelvis, and left arm in 1936.

Physical Examination was negative with the exception of some neck rigidity and slightly increased reflexes on right side of body. Examination of optic fundi was negative.

Clinical Course:

June 26th: Spinal puncture carried out. Pressure 170-220mm. water. Fluid cloudy—20 cc. withdrawn. No block. Lab. report showed 12,200 cells and occasional intracellular Neisserian diplococci. Culture was sterile. A second puncture was done at 6.00 p.m. and 20 cc. polyvalent antimeningococcal serum administered intrathecally.

June 27 — July 3rd: Daily spinal taps with administration of 20 cc. antiserum. Occasional intravenous of 1000 cc. glucose and saline. On June 27th patient developed Cheyne-Stokes respirations, and declined for a time. On July 3rd a typical spotted fever rash appeared over shoulders and back. Lab. reports on spinal fluids showed gradually decreasing cell counts.

July 6th: Severe headache and restlessness. Spinal tap and 20 cc. antiserum.

July 8th—16th: Daily spinal taps, without antiserum. Some improvement.

July 17th: Complete neurological examination in consultation. Puncture on July 18th. Making good progress.

July 26th: Relapse. Vomited small amount of brown vomitus. Headache severe. Semi-comatose. Spinal tap yielded practically nothing. Queckenstedt test positive.

July 27th: Cisternal puncture carried out with great relief of symptoms. 15 cc. cloudy fluid removed.

July 30th: Lumbar puncture. Pressure 250 mm. water. Pressure reduced to 75 mm. Block relieved and Queckenstedt again negative.

August 2nd: Pressure 350 mm.—reduced to 250 mm., after removing

20 cc. fluid. Patient began to develop tremors of tongue and dysarthria. These gradually disappeared later.

August 10th, 16th, 23rd: Spinal taps.

August 24th: Patient was allowed out of bed.

August 29th: Lumbar puncture showed a somewhat raised pressure and 81 cells per cmm.

August 31st: Patient discharged convalescent.

Throughout the course the temperature varied from 96^s to 102^t, averaging 99^o; pulse averaged 90; and respirations 20, jumping once to 35. Patient was irrational and very restless a great deal of the time, and received heroin gr. 1/12, and hyoscine gr. 1/150 as necessary. He received 23 lumbar and 1 cisternal puncture, a total of 140 cc. antimeningococcal serum (polyvalent) intrathecally, prontylin, and intravenouses of glucose and saline as necessary, during hospitalization.

CASE II

Mrs. S., white female. Age 28 years.

Patient admitted August 5th, 1939, one month post partum, diagnosed as mastoiditis.

Complaints: Pain in neck, headache, vomiting.

History Present Illness: Patient had had a discharge from left ear for some time, but during last few months had had no drainage from it. On morning of admission was seized with pain in head and vomiting. Was nauseated all day. Pain grew steadily worse, and was supplemented by stiffness of neck in afternoon. On admission patient was semi-comatose and extremely weak. Felt very cold.

Personal History: Negative with respect to present condition.

Physical Examination: Patient cyanosed and cold. Pulse rapid. Some air hunger and dysarthria. Appeared very ill. Indefinite tenderness over left mastoid region. Left auditory canal displaced and bulging. Moderate neck rigidity. Normal discs. Other systems negative.

Clinical Course:

August 5th: Spinal tap. 10 cc. cloudy fluid removed and sent to lab. Type III pneumococci reported present.

August 6th: Simple mastoidectomy performed after X-ray diagnosis of chronic mastoiditis. Daganon gr. x q.4 h. W.B.C. 20, 100. Lumbar puncture—pressure 750 mm. water. 150 cc. blood and 750 cc. glucose and saline intravenously.

August 7th: Two punctures. 150 cc. blood and 750 cc. glucose and saline. 20,000 units type III antipneumococcal serum given intravenously. Patient very nauseated. Adrenaline and coramine.

August 8th: Two punctures and 80,000 units serum intravenously. Pressure 250 mm. water. 100 cc. blood and 750 cc. glucose and saline.

August 9th—15th: Essentially same procedure. Patient received antiserum, blood, and saline almost every day.

August 16th: Continuous intravenous set up, alternating glucose and

saline. Patient placed on Bradford frame, over which Balkan frame was arranged. By this means continuous lumbar drainage was carried out, together with the continuous intravenous.

August 18th: Lumbar needle, Bradford and Balkan frames removed. Continuous intravenous discontinued as patient seemed to be getting too much fluid. Two 50 cc. ampules of 50% glucose per day substituted for the 10% glucose and saline.

August 21st: Puncture — pressure 280 mm. Fluid clear. Patient much better. Improving rapidly and able to take tray. Daily lumbar puncture continued.

August 23rd: Very severe headache. Pressure 300 mm. Positive Queckenstedt, showing complete block. 40,000 units antiserum intravenously. 1000 cc. glucose and saline together with 150 cc. blood.

August 24th: Patient unconscious. Pressure 320 mm. Complete block. Condition poor. Second puncture later on in the day showed pressure of 750 mm. water. Temperature rose to 107² and patient expired in evening without regaining consciousness.

During her illness patient received a total of 18 spinal taps, 420,000 units of specific antipneumococcal serum, approximately 1500 cc. blood by transfusion, as well as a good deal of fluids and hypertonic glucose, intravenously.

Comment

These two cases present a number of points of similarity, even though one was apparently primary and the other secondary and the etiological agent was different in each case.

1. Both were very ill on admission.
2. Treatment in each consisted essentially of daily lumbar puncture plus antiserum of the specific type. Case 2 received daily small amounts of blood by transfusion while case 1 did not. The meningococcal case received prontosil while the pneumococcal case got daganon.
3. Both cases showed some improvement followed by relapses. This was more marked in case 1 than in case 2.
4. Both became blocked showing a positive Queckenstedt, but Case 1 received a cisternal puncture at this point while case 2 did not.

It is to be remembered that pneumococcal meningitis is considered much more fatal than meningococcal although a considerably higher percentage of recoveries have been reported in the former since the introduction of Daganon. Case 2 followed a much more acute course than case 1 and was so rapidly fulminating after blockage that it is very doubtful if cisternal puncture would have been of any value even if there had been time to carry it out.

Some investigators have recently reported good results in meningococcal meningitis without serum — using sulphanilamide alone. Several even claim better results by using massive doses of prontosil only supplemented by daily lumbar taps to relieve pressure.

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