

## Medical Matters.

### THE HUMANITARIAN BULLET.



A surgeon who has assisted in one of the Russian field hospitals supplies a French medical journal with some notes on the effects of the Japanese bullet. The Arisaka bullet is one of the smallest-bore bullets, less than a quarter of an inch in diameter, and is made for speed. It has been called a humanitarian bullet because—strange paradox in a war of the most determined sacrifice of great numbers of lives!—its purpose is to spare life and avoid lasting injury, while disabling for the time those whom it wounds. Some of these purposes it may be said to fulfil; and the French surgeon points out that many wounded Russians have returned again to the fighting line. The lesions it has produced are in general milder than those produced by the larger-bore rifle bullets; the wounds were frequently aseptic, and through the softer flesh tissues it passed, in the expressive French phrase, "like a letter through the mail." The bones, too, were often pierced without disastrous fracture. But nearly all of these phenomena were observable only when the bullet had been fired at long range. At short ranges the Arisaka bullet had what one might almost call an explosive effect, due to its great velocity. Some of these results are only properly to be stated in medical journals, but we may note one curious effect. This steel-clad bullet was often found to have splintered on contact with less hard bodies, like a tendon edge or an osseous crest, and these splinters became in their turn very dangerous projectiles, destructive and hard to remove. Lung wounds healed with great facility; abdominal wounds were very serious.

### CEREBRO-SPINAL MENINGITIS.

The following is a brief summary of a paper by Dr. Grant Gould Speer (*Med. Rec.*) on Cerebro-spinal Meningitis:—

Cerebro-spinal meningitis, when first recognised, was purely epidemic in character, and is now endemic in large cities. Its method of transmission from place to place and person to person is unknown.

According to the latest and best investigators, the exciting cause of the epidemic form

is the diplococcus intracellularis meningitidis. And no evidence has been produced to prove that the cause of epidemic and sporadic cases is not the same.

The probable entrance of the pathogenic germ into the system is through the respiratory tract, especially that portion covered by the Schneiderian membrane. And its point of attack and usual seat of greatest activity is the base of the brain, from which it involves other portions of the meninges of the brain and spinal cord.

Its action is that of a septic invasion, and its symptoms a combination of toxin poisoning, nerve irritation and pressure.

The rate of mortality in late epidemics has been about 50 per cent., which may be lowered by a better agreement among the profession regarding methods of care and treatment.

Spinal puncture is a requisite of exact diagnosis, but as a method of treatment it is still in the experimental stage, and leaves much to be desired.

Old methods of treatment may be made effective and reliable if used with decision and pushed to the limit of therapeutic effect.

Cerebro-spinal meningitis in its worst form is amenable to treatment.

### THE COLON BACILLUS.

In a paper on the "Colon Bacillus" (*Jour. A.M.A.*), Dr. Victor C. Vaughan, jun., says:—

1. The colon bacillus produces a powerful poison when grown on artificial media.

2. This poison is intracellular in character, and is contained within both the living and the dead bacterial cell.

3. The poison can be separated from the other constituents of the bacterial cell only by means which chemically break up the latter.

4. The peritonitis which occurs after intraperitoneal inoculation with the colon bacillus is due to the presence of the poison in a combined and not in a free state.

5. The intracellular poison of the colon bacillus causes a marked fall in the body temperature.

6. The poison of the colon bacillus apparently causes death by paralysis of respiration.

7. The intracellular poison is an essential group of the bacillus, and can be built up synthetically on proteid-free media.

8. This intracellular poison is the poison which causes death in animals inoculated with cultures of the living colon bacillus.

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