1. Very acute form. The patients reached us very quickly, but were already in a manifestly meningeal condition. They rapidly became delirious or comatose and died in less than 48 hours.

2. Ordinary form, with stiffness of back of neck, Kernig's sign, excitement, and fever. Cerebro-spinal fluid cloudy; death within ten days.

3. Slow form lasting three weeks, with very irregular thermic curve, and periods of excitement and quiet. The cerebro-spinal fluid filtered more or less intermittently through the wound; its issue sometimes coincided with a partial remission of symptoms. This fluid, clear or mixed with pus or blood, had an ammoniacal odour. The condition produces progressive enfeeblement and terminates in death.

4. Form admitting of cure. Certain patients were cured by one of the following methods—

- Simple penetrating wounds limited to the eyeball can also produce meningeal disturbance. Several observations have been published upon this subject. In 1897 I presented to the Societe Francaise d'Ophthalmologie the following summarised account of a case resembling in every way that reported at the beginning of this paper.

A child, aged 12, was wounded in the cornea by a blow with a pair of scissors. On the 2nd day very painful ocular congestion with redness of the conjunctiva, and great urinary frequency was observed, with delirium and excitement. On the 3rd day the temperature rose to 39° C.; the patient died on Oct. 31st, three weeks after the injury and 12 days after the operation.

- On Nov. 3rd a man, aged 40, was admitted to the Hotel-Dieu as an urgent case, with a temperature of 40° C. and death within ten days.

- Pathogen Agency of the Pneumococcus.

The pneumococcus is the pathogenic agent of meningesis following infected wounds of the eye. Since 1897, at the Societe Francaise d'Ophthalmologie—i.e., in the thesis of my pupil Painblanc (Lille, 1897), and in a lecture delivered at the Hotel-Dieu (Press Medicale, 1901)—I have insisted on the part played in these complications by the pneumococcus. In Germany, a year before my first communication—i.e., in 1896—Zimmermann had reported, in a case of meningitis following enucleation, the presence of "undifferentiated..."
The pneumococcus, however, has been recognized since 1881 by Calmette, Director of the Pasteur Institute at Lille, and I attempted at that time to produce the same phenomena experimentally. Our results with rabbits were as follows: (1) Injection into anterior chamber with a strong pneumococcal conjunctival culs-de-sac and in the lacrymatory canals. In these two cases we did not find orbital or meningeal suppuration, but we proved the presence of the pneumococcus in the optic nerve-sheath, at the level of the optic chiasm, and at the base of the brain. The pneumococcus often exists as a saprophyte in the conjunctival culs-de-sac and in the lacrymatory canals without causing the slightest inflammation; but it is also often pathogenic, producing conjunctivitis of the new-born and corneal ulcer with hypopyon, and when also often pathogenic, producing conjunctivitis of the culture; death in two days, due to pneumococcal toxemia. Since 1881, many analogous adult cases have been reported. Must we assume that a process of anaphylaxis takes place—that after a former pneumococcal infection the system is specially sensitised for the pneumococcus? In any case this micro-organism is a redoubtable enemy.

Method of Treatment. Experiments in vitro show that certain antiseptic solutions (the mercuric salts, such as sublimate, for instance) do not penetrate the enveloping capsule of the pneumococcus. Lavages, and even subconjunctival injections, of sublimate or cyanide probably have no action, since ocular infection depends upon the pneumococcus. Alkaline substances dissolve the capsule and prevent the entrance of the culture from spreading. Since 1881, I have used hyperchlorite of calcium, but I have had to stop using it, because it sets up irritation of the conjunctiva. The hypochlorites again came into use during the war (Carrel's method, with Dakin's fluid), and I myself in 1917 advised the employment of chloramine in 1 per cent. solution, for oculo-orbital war injuries. In the presence of a penetrating injury of eyeball or orbit, the emergency is essentially the rapidity of diagnosis and treatment. The patient should be carefully and quickly examined with use of radiography or radioscopie. Intervention should follow rapidly—less than 34 hours after the injury. My pupils, Duverger and Velter, in their work "Ophtalmologie de Guerre," have detailed the rules of rapid treatment, which treatment is essentially conservative. But in the presence of an acknowledged panophthalmitis, all delay is dangerous; here the eye is painful, definitely lost for purposes of sight, and likely to induce grave complications. The surgeon must choose between enucleation and exenteration. In 1884, de Graefe, after the death of two of his cases of panophthalmitis, insisted upon simple evisceration. In 1889, an interesting discussion on this question was held at the Société Française d'Ophthalmologie; Panas and Gayer preferred enucleation, but the former afterwards adopted exenteration. In 1895, I advocated in 1882 for all cases of panophthalmitis. Exenteration has this great advantage over enucleation: the sheath of the optic nerve is not thereby opened and infected. At the International Congress of Medicine held in Paris in 1900 Pfeuger, Schneitz, and Swanz presented reports on "Enucleation and suggested operations to replace it." Agreement between them was not complete. Moreover, the total statistics from 1881 to 1886 of Moorfields Hospital showed seven cases of death in 6876 enucleations. It must be noted, however, that these 6876 cases were not all of panophthalmitis, and that the seven deaths all followed panophthalmitis. In 1908 Albert Trousseau, of the Trocadero, in his "Manuel d'Ophthalmologie," declared that "exenteration with the cautery as advised by Lapersonne should be accepted as the least dangerous and most efficacious operation against panophthalmitis." My colleague, Dr. Fournel of the Hôtel-Dieu, declared that "exenteration with the cautery as advised by Lapersonne should be accepted as the least