will have just the opposite effect." Theoretically what we require is that the irrigation fluid shall at the moment of contact with the nerve tissues contract the small vessels and at the same time not cause any heat coagulation of the cut surface of the brain. In my opinion, therefore, the temperature of the fluid should not exceed 115°F.—that is, about 46° C.—but it is equally certain that it must not fall below 110°F. or 43.5° C. If a large irrigator be used it is practically an easy thing to keep the fluid at the desired temperature on account of its mass, and it is gratifying, especially in a cerebellar wound, to see the oozing gradually cease during the steady flow from the irrigator "hose" pipe.

Before leaving the question of hæmorrhage from the arterial system I must refer to the use of chloroform in this particular. As will be seen in the accompanying kymograph tracing (Fig. 11), one of the most striking features of the physiological action of chloroform on the mammalian is that it soon (10 to 20 seconds) causes a marked fall in blood pressure. Consequently when a lesion is about to be extirpated, and there is reason to expect considerable oozing, or when the brain is obviously turgid with congestion, I always ask that the chloroform percentage should be raised for, say, a quarter to half a minute to 1 or 2 per cent. This at once induces a convenient, proportionate, and, of course, temporary anæmia.

The consideration of capillary oozing and hæmorrhage brings us logically to the question of bleeding from the venous system, because capillary oozing is so dependent on the venous pressure. The same steps, therefore, which diminish the latter will also reduce the former.

Veins.—All bleeding from the veins and sinuses in bone can be immediately and absolutely certainly arrested by plugging with wax if the periosteum round the hole is completely removed. No difficulty, therefore, should ever arise from hæmorrhage from this cause. It is otherwise with wounds of the sinuses and Pacchionian bodies and venous lakes in the dura mater. The bleeding from these, however, no matter how severe, is immediately controlled by pressure with the point of an instrument, while the opening is closed by a fine lateral suture on a round needle in the usual way. The principal veins if necessary are, of course, ligatured like arteries by passing a round needle beneath them, and there only remains, therefore, for consideration the control and arrest of venous oozing.

Control of Venous and Capillary Oozing by the Use of Oxygen.

Venous bleeding as just stated, commonly occurs in association with capillary oozing, and is often very troublesome in spinal as well as in intracranial operations, especially those at the base of the skull.