

ture through the cerebral tissue immediately below and around the vein, and then to tie the vessel by drawing with equal force on the two ends, not constricting the vessel with so much force in tying the knot as to tear through its weak walls.

Sometimes packing and hot water (not over 110° F.) will aid greatly in arresting any copious oozing. If the sinuses are torn or opened, the hemostatic forceps may be used to grasp the opening, if it is small, or, as done by Dr. Keen in one case, by three pairs of hemostatic forceps placed alongside of each other, the opening can be closed. The forceps may then be allowed to remain *in situ*, and may be safely removed in three days. Should this method not be available, then the sinus should be plugged with iodoform gauze, the end of which protrudes through the scalp wound, and can be safely removed again after three days.

Any of the superficial sinuses of the brain can be exposed with almost perfect safety by gnawing away the bone over them after having separated the sinus gently from the skull by Horsley's dural separator or a probe. The point where the parietal veins enter the superior longitudinal sinus should be avoided, if possible, as these are large vessels, and a great amount of blood may be quickly lost. Hemorrhage from the sinuses, however, can be controlled again by packing, if not by the hemostatic forceps, or possibly by fine suture.

In separating the dura from the brain, great care must be taken as we approach the superior longitudinal sinus. The veins of the brain widen into venous bays (the parasinoidal spaces), from which the hemorrhage will be often more profuse and alarming than from the sinus itself. The loss of blood from the cerebral veins is certainly more dangerous than the loss of an identical amount from other veins of the general system. Hence, when the finger gently introduced under the dura in the neighborhood of the superior longitudinal sinus perceives any attachment of the dura to the brain, we should be most careful to desist from any further separation of the parts, lest by doing so these large veins be torn and a parasinoidal space opened. On no consideration should this be done until the bone has been first widely gnawed away over the point of the adhesion to give ample room instantly to deal with possible hemorrhage.

Not uncommonly we can avoid a great deal of hemorrhage from the cerebral tissue by lifting the pia from the underlying convolutions so as to avoid the veins by working under them. The pia can be drawn out of the deep sulci in this manner with relative ease. Great care must, of course, be used in manipulations under such a displaced pia.

The tumor, when discovered, may be removed either by the finger if it be well encapsulated, or, if not, then by the knife, which should be held vertical to the surface, so as to injure the adjacent cortex as little as possible. At the same time, we must remember, especially in cases of sarcoma or its allies, that the infiltration of the cerebral tissue extends some distance beyond the tumor proper. Therefore, some of the apparently healthy brain tissue must be sacrificed for the purpose of safety. This may induce paralysis of important centres, but no such calamity can compare with the certainty of a return, and, therefore, of a future fatal