

Love. (P. 7.)

## SUCCESSFUL APPLICATION OF THE TREPHINE OVER THE RIGHT LATERAL SINUS OF THE BRAIN.

— J —  
BY PAUL F. EVE, M. D.

*Professor of Operative and Clinical Surgery in the University of Nashville*

Surgeon Genl's Off.  
LIBRARY  
434099

I TAKE leave to report the following unusual operation—the successful removal of four discs of bone from over and near the right lateral sinus: this, too, in direct opposition to our best authorities in surgery. Mr. Erichsen declares that “there are certain parts of the skull—over the venous sinuses, for instance, and near the base—to which no prudent surgeon would apply the instrument.” Prof. Gross, too, says: “there are certain parts of the skull where, if it is possible to avoid it, the trephine is never to be applied”; and he specifies the lateral sinuses, to which he makes an additional objection to operating over them, due to the inordinate thickness of the occipital bone.

My patient, Mr. D. P. Eubanks, a stout, healthy man, aged 42 years, while Sheriff of White County, Illinois, was struck from behind with a bludgeon, having a knot or bend in it, and knocked insensible for sixteen hours. This occurred two years and ten months ago; in the meantime he had sought relief by visiting Evansville, Cincinnati, St. Louis, &c., and found one surgeon who ventured only to cut down on the depressed bone. Finding I had returned from the last-named city to Nashville, he arrived here on the 25th of October, and was put upon treatment preparatory to a tentative operation at trephining.

Precisely midway between the occipital protuberance and

the external meatus of the right ear, there was a depression in the cranium of about three-quarters of an inch in depth, with the circumference of a silver half-dollar. This resulted from the blow already referred to; and while the patient had not become epileptic, he yet experienced symptoms demanding operative interference. One professional gentleman, as we have mentioned, had already attempted this. Mr. Eubanks was now habitually costive; walked with difficulty, and only a short distance; complained of constant weight and oppression in his head; of a dull annoying pain, radiating at irregular intervals from the point injured; had lost his energy; was never cheerful, and was losing flesh and strength. Nothing could provoke a smile; was almost hopeless, and said that he occasionally felt like losing his senses.

Dr. Buchanan unexpectedly coming into my office, first encouraged an operation, by stating that his father once saved a patient in whom the longitudinal sinus had been opened; thus confirming the opinion that wounds of the large venous canals of the brain were not necessarily fatal.

On the 28th of October, (Dr. Buchanan being indisposed,) assisted specially by Dr. Briggs, Drs. Van Lindsley, Fitts, and others, and before the class, the usual crucial incision was made over the depression in the skull; then, by detaching the occipital portion of the occipito-frontalis and the insertion of the trapezius muscles, thus getting below the superior curved line of the os occipitis, the half-inch crown of Galt's trephine was applied, and, working it very cautiously, in about fifteen minutes a button of bone was removed, fortunately, too, without wounding the dura mater. It was our design to cut through the osseous structure, found, happily, quite thin, directly above the right lateral sinus, and now, by sawing out three other circular pieces of bone, it was made evident that our object had been carried out; for, in the space made by the elevation of these three disks, lay, undisturbed, the lateral sinus, readily recognized by the deeper color of its venous blood. Nothing now remained to complete the operation, which was performed in about forty minutes, but to cut off the angles left by the



trephine, round off the bony opening, and secure over it, by silver-wire sutures, the four angular flaps of the scalp. Some five ounces of blood was lost, but only one artery was tied. Coming from under the influence of ether, the patient expressed himself feeling better, and was soon after conveyed to the hospital.

He was put upon the most rigid after-treatment—absolute diet and perfect repose. A slight reaction the next day was met by small doses of sulphate of magnesia; and he subsequently experienced not a serious symptom. Of course one so long and so seriously afflicted could not recover at once, and had periods of depressions, but nothing more. Locally, cold cloths were applied, then changed to emollient tepid poultices; a very blunt probe was inserted every day or two, at the most pendant cut, to prevent accumulation under the scalp, which gave exit first to sanies, for some days, when the wire sutures were removed, and gradually the secretion became lessened and converted to laudable pus. The wound was thus kept open to the thirtieth day, when it gradually closed.

The case found most similar to the one here presented, is recorded by my friend, Prof. F. H. Hamilton, in his *Treatise on Military Surgery*, page 240, where he notices the injury sustained by a lad ten years of age, who was brought into Bellevue Hospital with fractured skull, made by the wheels of a street-car. A fragment of the occipital bone had lacerated the lateral sinus, the hemorrhage was profuse, but completely arrested by a pledget of lint secured by a roller. The patient, however, died during the night, due, undoubtedly, to the extensive fracture of the os occipitis and injuries within the cranium.

The learned Velpeau published that Warner, Marchetti, Garangeot, Sharp, Pott, Callisen, Mosque, and Lassus, had opened various sinuses of the dura mater, and without unhappy results; and moreover, that Biluger, Copland, Gooch, Abernethy, and Hutchinson, had exposed the brain in perforating the occipital bone. Over the protuberances of the cerebellum, he adds that there are no arterial branches except the occipital,

and the lesion of the trapezius or complexus muscles is not of much importance.

Prescott Hewett, Esq., the author on Injuries of the Head, in *Holmes' System of Surgery*, declares that the trephine has been applied, and successfully too, close to the foramen magnum occipitis.

In the French *Dictionary of Medicine*, in thirty volumes, article on The Trepan, we translate that surgeons have been forbidden to operate over the course of the venous sinuses of the brain for fear of hemorrhage resulting. This, however, is not so dangerous as was formerly believed, as the blood does not flow from them with much force, and the slightest compression will arrest it; so then, continues he, these operations may be performed when a fracture compresses the venous canals, or spiculæ of bone are thrust into them.

Knowing full well the responsibilities involved in the above case, the operation would not have been attempted, but for the presence of the patient's father (now aged 72), and the valuable assistance of my colleague, Dr. Briggs. Its successful termination is due, in my judgment, much to the good conduct of the patient himself, to the thinness of his cranium where trephined, and particularly to the fact that the dura mater was not opened. For this all-important result we are much indebted to the instrument revived by Dr. Galt, of Virginia, in 1860—the conical trephine.