tion. I may here quote from Sir Charles Bell's "Surgical Observations" (London, 1816) : "It is extraordinary that any one who has ever raised the skull cap in dissection and felt the strength of the universal adhesions of the dura mater to the lower surface of the bone, could for an instant believe that the arteria meningea media has power of throwing out its blood to the effect of tearing up these adhesions from the entire half of the cranium." Here, to substantiate his statements that the dura mater is first of all separated from the skull and that the extravasation is consequent upon that separation, he goes on to describe the following experiments: "Strike the skull of the subject with a heavy mallet; on dissecting you find the dura mater to be shaken from the skull at the part struck. Repeat the experiment on another subject and inject the head minutely with size injection and you will find a clot of the injection lying betwixt the skull and the dura mater at the part struck and having an exact resemblance to the coagulum found after violent blows on the head." This would apparently appear to be conclusive, but to carry it further in cases of fracture, such as occurred in this case, there are also, apart from the blow or injury which must necessarily have been received to produce a fracture, certain alterations in form of the skull accompanying the blows which tend to lessen the attachments of the dura, there always being a certain amount of play between the edges of a fracture sufficient to lessen a certain small amount of the dura from the skull.

The dura mater being separated from the skull to a certain extent, how does it come about that such a very large surface of the dura is separated? Simply that the blood is poured out in sufficient force and in ever-increasing amount to strip the membrane from the bone, because it is very difficult to conceive that that membrane can be shaken from the base of the skull by a blow in the parietal region, and yet meningeal hemorrhage often extends as far as the cavernous sinus. Once the blood is forced in it acts on the principle of the hydraulic press.

The hydraulic or hydrostatic press depends upon the equal transmission of fluid pressure, viz., "that the pressure exerted anywhere upon a mass of fluid is transmitted undiminished in all directions, and acts with equal intensity upon all equal surfaces and in directions at right angles to these surfaces." Thus by a simple hydraulic press a large weight was supported through the column of water by a much smaller weight and in inverse proportions to the ratio of their areas. This, in turn, gives rise to the hydrostatic paradox in which, by decreasing the