

made use of is injected with its ferments and the unavoidable admixture of flocculi of fibrin and air globules direct into the vessels. It is quite evident that all these dangers are avoided if the blood be injected into the subcutaneous cellular tissues. One proceeds in the following manner (*v. Ziemssen's Vorträge No. 3, 1887.*): The blood which has been thoroughly defibrinated and with the greatest care kept aseptic and exactly at a temperature between 37° and 40° C. is injected with a small syringe to the depth of 25 centimetres into the subcutaneous connective tissue of the thigh and the part is immediately afterwards vigorously rubbed by an assistant. This massage is a very important part of the performance. As there is considerable pain, especially when larger quantities are introduced, *v. Ziemssen* advises chloroform anaesthesia as very necessary. For every syringeful a fresh insertion must be made and the process is continued so long as there is any necessity. *v. Ziemssen* has injected as much as 350 gramm. (over 12 ounces) in 14 insertions; after the operation, if there is much pain an ice bladder may be applied and the patient given rest. The operation is practically free from danger. Only twice has pus been observed to form at the point of introduction and then in consequence of slight and easily avoidable errors. Neither chills, nor fever, nor albuminuria, nor hæmoglobinuria has been observed. The subcutaneous cellular tissue serves as a most efficient filter which retains every coagulum, air globule or ferment, while the red blood corpuscles rapidly and easily pass through. Further, after a few days not a trace of free blood can be found at the point of injection, while in the circulating blood there is at once an abundant evidence of an increase of hæmoglobin, the quantity of which is frequently doubled in twenty-four hours. This amount of increase, however, is not permanent, but

during the next four or five days a gradual diminution takes place down to a stationary point which, nevertheless, is always higher than that before injection.

The hæmoglobin becomes more and more increased by every repetition of the operation until finally the normal quantity is reached. The numerical increase of the red blood corpuscles also takes place at the same time. In this manner *v. Ziemssen* has succeeded in curing different forms of severe chronic anæmia in the course of a month. He has not yet tried this method in cases of acute anæmia from sudden loss of blood, but in these cases also he considers the subcutaneous injection strongly indicated. In cases further where delay would be dangerous, or, when from any reason, the injection of blood cannot be performed, the subcutaneous injection of salt water is recommended. This has the advantage over the intravenous transfusion, it being easier to accomplish and absolutely free from danger. It is not necessary to use distilled water; ordinary spring water, which has been sterilized by boiling, may be unhesitatingly injected. The subcutaneous cellular tissue retains all elementary foreign bodies provided only they are aseptic. The absorption and removal of the fluid goes on very easily so that narcosis may be dispensed with. It only requires four or five insertions to introduce about 600 gramm. of water. If any danger shows itself from the injection of salt water, pointing to paralysis of the heart, the blood injection may be prepared for the next experiment, for, as experience teaches, the salt water injection may be sufficient to delay the end in really severe cases of loss of blood, but not to prevent it entirely. In these cases new blood must be introduced into the body from without, and this can only be accomplished by the blood injection. —*Wiener Medizin. Zeitung.*

## EDITORIAL

### DAINGEROUS DRUG PREPARATIONS AND THE DUTY OF JOURNALS REGARDING THEM.

THE attitude which those who arrogate to themselves the right to become public teachers and leaders of medical thought and education, should take with reference to the well-known tendency there is for advertisers of articles, to

say the least, doubtful use, can be no undecided one; since knowing, perhaps, more than any other class, the gullable capacity of the ordinary specimen of the *genus homo*, and still further knowing the pernicious use which may be made of many otherwise useful preparations, they become guilty from the moral standpoint, of gross imposition, should they knowingly countenance by advertising