ART. II.—*On Alum and Ice in Hematemesis.*

By H. R. DE RICCI.

SOME years ago I had an interesting case of hemorrhage from the stomach, which, contrary to the expectation of the medical men who attended it with me, terminated favourably. The notes of that case, together with many others, remained in my desk, till, on returning a few weeks ago, after an absence from this country of about two years, I took them out; and some interesting cases of this generally fatal disease having lately occurred, I was tempted to lay this one before the profession.

One of the cases I allude to above is the painfully sudden and fatal one of Dr. Robert B. Todd, whose loss will be felt in every place where science is cultivated, and by every member of our profession who feels anxious for its honour and advancement. The death of Dr. Todd leaves a blank, not only in Great Britain, but in the world at large, which it will be no easy matter to fill up,—for he combined in his own person two of the greatest qualities for attaining eminence, and which, though not uncommonly met apart, are very seldom indeed found united in the same individual. Dr. Todd was not only an eminent physiologist, perhaps the first physiologist of his day, but he was also *a most practical physician*,—not confining his studies to the mere theoretical investigation of nature's doings in the economy of the human frame, but applying the facts he thus was gathering and daily adding to, and improving upon rational and scientific principles, an art which, but for the light of physiology, would soon degenerate into mere routine or irrational empiricism.

My patient was a young man of about twenty-one years of age, slightly made, and of delicate appearance, but still not suffering in any way, nor complaining. He belonged to the higher ranks of life, and, mixing in the society of his own sphere, he partook freely of all its various enjoyments. He went to balls, and danced much; he went to hunts, and rode hard, yet he never seemed much the worse for his active amusements. His appetite was good, and his digestion equally so; only it was observed that he appeared always to have a craving for sweetmeats of all kinds, and at dinner he would take his meal principally of the cakes and jellies of the second course, rather than of the substantial joints which preceded it.

One day, as he was out riding, he felt suddenly weak, and as if unable to hold in his horse; he, therefore, turned home, where, immediately on his arrival, he was attacked with vomit-

ing of blood, which, though at first dark and grumous, was quickly followed by more of decidedly arterial character.

I first saw him about twenty hours after the first attack. He had been in the meantime most judiciously treated, but, unfortunately, the turpentine which had been prescribed, and which is so powerful in restraining internal hemorrhage, acted invariably as an emetic, and in consequence had reluctantly to be abandoned for other remedies.

On my arrival the patient presented the usual anemic appearance which attends profuse hemorrhage. His countenance was anxious, bathed in cold perspiration, his eyes sunk, and his pulse rapid and weak. There had not been any hematemesis for some hours previous to my arrival, and the astringent remedies which had been administered seemed for the present to be exerting a beneficial effect; we, therefore, retired to consult upon the probable origin of this bleeding, that we might be guided by as correct a diagnosis as possible, into the most rational, and, therefore, the most likely to be successful, mode of treatment.

The predominant opinion at the consultation was, that the hemorrhage proceeded from a general oozing from the mucous membrane of the intestinal tract, and this view was strengthened greatly by the abundant tarry stools which the patient had passed since his first attack. But, after attentively listening to all the evidence I could collect on the subject, and carefully examining the last blood vomited, I came to a different conclusion as to its origin and source. I believed it to proceed solely from the stomach; my principal reason for such a conclusion being the *bright colour* of the blood, it coming up in large quantity, firmly coagulated, some of the coagula being apparently accurate casts of the curvature of the stomach. Had the vomited blood regurgitated out of the duodenum from antiperistaltic action, it would have been of a very different colour, much darker at any rate, if not entirely black; and it would have been different in character also, not in firm coagula, but grumous. As for the melanotic stools, they were easily accounted for, without the aid of bleeding from the intestinal mucous membrane; in all probability there had been some hæmorrhage previous to even the first attack of hematemesis, but it had not been so great as to over-distend the stomach, and compel it to relieve itself by vomiting, and it had been got rid of by the usual process of digestion, thus tinging with blood the patient's stools. The vomiting also came on at intervals of some hours, the patient complaining of a sense of distention before, and of considerable relief after having vomited.

From these several symptoms I concluded that the origin of the hemorrhage was probably an ulcer—the “perforating gastric ulcer of Rokitansky” so well described by Dr. Cathcart Lees, which, happening to lie over the track of an artery, had eaten away into its coats; or it might be solely a bleeding from the surface of the ulcer, resulting from an hemorrhagic tendency. An objection raised to this diagnosis was, that so serious a lesion of the stomach could not have existed without our patient having previously complained of uneasiness, if not actual pain, in that region; but the disease in question (as Dr. Lees informs us) “may proceed even to perforation of the peritoneum without any premonitory symptom to lead our attention to the part.” And besides, upon inquiring, I found that our young patient had for some months complained of uneasiness immediately after eating, and that especially if he had taken solid meat. This served to confirm my diagnosis, and, having thus made up my mind as to the origin of the blood, I proceeded to select a remedy which, by acting locally on the stomach, would afford us some hopes of staunching its flow. Turpentine, as I have stated above, was inadmissible; so we tried gallic acid in full doses and acetate of lead often repeated, but we completely failed in restraining the hemorrhage, which returned every few hours. We tried matico and every other vegetable astringent that could be thought of; we even deluged our patient with Ruspini’s styptic, which had been suggested by some non-medical friend; but all to no effect.

All this time we had been giving nourishment in the shape of iced beef-tea, with eggs, jellies, and arrow-root; and when the powers of life seemed ebbing low, we had cautiously administered claret. But still the hemorrhage persisted.

After the last act of vomiting, the change in the aspect of our patient became so alarming, that for some minutes we were in doubt whether the spirit had not fled; no pulse could be felt at the wrist; the eyes were fixed and glassy; and the respiration seemed to be suspended; we quickly administered some brandy and water by the mouth, and gave an enema with chloric ether to try and rouse our patient; and, having had a brief and rapid consultation with my colleagues, to whom I succinctly explained my views, I determined to give at once a large dose of powdered alum, to pack the stomach with small pieces of ice, to place a bladder filled with ice over the epigastrium, and, in order to counteract the very lowering effects of such treatment, and avert the already impending death by asthenia, to administer brandy, ether, and other stimulants, as also food, *per anum*, and to give no nourishment by the mouth until we could

fairly hope that a firm and satisfactory coagulum had been formed at the mouth of the bleeding vessel. This plan I saw carried out myself, not trusting even the administration of the enemata to nurses and underlings. Every three hours the alum and ice were to be repeated, as also the enema, which consisted of the yolks of two eggs, a tablespoonful of essence of beef, the same quantity of port wine, and five grains of quinia. This was administered with the long tube, and, fortunately for our patient, he had a wonderful retentive capacity, having succeeded in holding as many as six of these injections without feeling any desire to go to stool. Slowly the weary hours crept along, as we anxiously watched for the return of that dreaded vomiting! Twelve hours had now gone by since the adoption of my plan, and no hematemesis had returned; at the same time that the freezing process had produced no ill effects upon our patient, thanks to the nourishment and stimulants he was getting per anum. We now began to diminish the alum and ice, but still persisted in giving food only by the rectum. Twenty-four hours elapsed, forty-eight hours, seventy-two hours, and no hemorrhage. We now stopped the alum entirely, and only gave a little ice occasionally, but still kept up the injections; at last, imagining all danger to be over, we ventured to give a little nourishment by the mouth, for we believed that by this time not only was there a firm clot established, but we even hoped it might be partly organized. But we were doomed to disappointment! and, ninety-five hours after the last attack, blood vomiting set in again, and in such fearful quantities that, at one moment, we believed our patient gone. Again we resumed the old plan, which had already proved of so much service: again we administered large doses of alum, and again we packed the stomach with ice, and repeated the enemata, with food and stimulants; but, though I still held out hopes to his distracted parents, I confess that I myself had very little; while my colleagues, I think, had none at all, and some even considered me unwise in persisting in a plan which apparently only seemed to disturb what, to all appearances, was a *dying man*.

But I had confidence in the plan which had proved already so powerful in my hands; I only feared the state of excessive prostration to which the last attack of hematemesis had brought our patient, and which, by so reducing the vital forces, might render him incapable of responding to the stimuli which we were now freely administering to him. I would have given anything for an apparatus for the transfusion of blood. If the patient did not rally soon from the stimulants administered, he

would *die from want of blood*, and if I could only extemporize an apparatus and transfuse even a small quantity of that life-giving fluid, I felt that the patient could be saved. Necessity is the mother of invention: I had with me a small pewter syringe capable of holding about four ounces; to the nozzle of this I adapted about one inch of the extremity of a gum-elastic catheter open at the end; and having got up a stout young fellow from the farm-yard, to whom I explained my object, I waited for the moment when I should perceive that life was ebbing fast, and then, trusting to Providence, make the best use I could of my very clumsy and primitive apparatus. Fortunately we never had to recur to this "*ultima ratio*;" the alum and ice again did their duty, as also the stimulants and the food. We persisted in the use of these a longer time than on the previous occasion, and finally, after three weeks' anxious watching, and upwards of 140 hours' absolute fasting, so far as the stomach was concerned, we had the satisfaction of seeing our patient fully convalescent.

All fear of hemorrhage once passed, we gave chalybeates and vegetable tonics, fresh air, and gentle exercise, as also food in gradually increasing quantities; and, now that several years have elapsed, I am happy to say that our patient never was in such good health as at present. All trace of delicacy has disappeared, and he is as stout and as hearty as any man need wish to be.

I do not remember ever reading anywhere of alum being prescribed in such case, or in an analogous one; and at first sight it would seem an improper remedy, as alum in large doses generally acts as an emetic, but in this case it appears to have been kept in check by the ice. It is also instructive to remark how utterly useless were all the vegetable styptics we tried, and I think I can fairly assert that we proved most of those described in books.

In conclusion, let me say a few words about transfusion of blood. Many years ago I ventured to assert, that a time was coming when *venesection* would be as rare an operation as it was then a common one; that time has very nearly arrived; I now go a step beyond, and venture to predict that a time will come when transfusion will be commonly practised, not only in cases of "*killing hemorrhage*," but in many case of disease also not depending on loss of blood. We have abundant proofs that not only can blood, but many different and heterogeneous fluids, be injected into the circulation of a living animal, *without the slightest peril*. The only difficulties we have to contend with in tranfusion of blood are the danger of introducing air

into the blood-vessel, the viscosity of the fluid itself, its tendency to coagulate, and the consequent danger of small pieces of solid fibrine entering the circulation. I think that the danger from the entrance of air has been much exaggerated, and at any rate a little care would be sufficient to obviate it. As for the viscosity of the blood and its tendency to coagulate, I do not despair of overcoming that difficulty also, and of so preparing the blood, *without impairing its vitality*, as to render the injection of it into a vein a matter of only ordinary care.

ART. III.—*A Case of Dislocation of the Ulna forwards at the Elbow, without fracture of the Olecranon Process; with Observations.* By EDWIN CANTON, F. R. C. S., Surgeon to the Charing Cross Hospital, and Lecturer on Surgical Anatomy.

“There is no joint in the body which, under accident, requires more anatomical and physiological knowledge than the elbow,—particularly in dislocation,—where the force required to separate the bones must necessarily be so violent as to produce extensive tumefaction of the soft parts, and conceal the relative position of the natural eminences of the joint which can alone lead to a correct judgment of the injury. Swelling, pain, and loss of motion, are not the signs by which the true nature of the accident can be comprehended; but the fixedness of the joint, and the change of the position of the condyles of the humerus with the olecranon process of the ulna, are the best indications of the displacement of the articular surfaces of the elbow-joint.”—B. Cooper, *Lectures on the Principles and Practice of Surgery*, p. 343. London: 1851.

So rare is dislocation of the ulna forwards at the elbow-joint without a simultaneous fracture of the olecranon process, that many authors have denied the possibility of its occurrence:—e. g. Petit^a, Boyer^b, Monteggia^c, Sanson^d, Bérard^e, Savary^f, S. Cooper^g, B. Phillips^h, Cheliusⁱ. The following writers tacitly agree with the above, by making no mention of this form of injury:—Vidal (de Cassis)^j, Dupuytren^k, Sir A.

^a *Maladies des Os*, tom. i., p. 236. Paris: 1772.

^b *Traité des Malad. Chirurg.*, tom. ii., p. 379. Paris: 1818-26.

^c *Institut. Chirurg.*, vol. v., p. 71. Napoli: 1825.

^d *Nouv. Elém. de Pathol. Med. Chir.*, tom. iv., p. 623. Paris: 1828.

^e *Dict. de Méd. Art. “Coude.”*

^f *Dict. de Scien. Med. Art. “Coude.”*

^g *First Lines of Surgery*, p. 700. London: 1840.

^h *Lectures on Surgery*, *Medical Gazette*, July 10, p. 615. London: 1840.

ⁱ *System of Surgery*, vol. i. p. 788. Translated by South. London: 1847.

^j *Traité de Pathol. ext.* Paris: 1839.

^k *Surgical Works.*