there is that terrible "white syncope" at the onset, from which recovery rarely occurs, there should be no hesitation in performing direct cardiac massage. He goes on to say that if we have to deal with "blue syncope" artificial respiration and all the usual means of resuscitation should be tried, but if, after five or six minutes of useless efforts, not a single pulsating or respiratory movement occurs, subdiaphragmatic massage should be done without delay.

In patients of the type we are dealing with, however, it is advisable greatly to shorten the period of five or six minutes devoted to useless effort. In dealing with a case I regarded as typical, I should feel inclined to advise cardiac massage within one or two minutes of the onset of syncope.

For notes of one of the cases of death after anaesthesia I am indebted to Dr. Tangye, House-Physician to the Children's Hospital, Birmingham.

I wish to acknowledge the use of several abstracts which have appeared in the *Journal of the American Medical Association* during the last two years.

Appended is the bibliography I have used, which is by no means complete and is not altogether confined to the anaesthetic aspect of the subject.

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A FATAL CASE OF STATUS LYMPHATICUS.*

BY

HARVEY HILLIARD, M.R.C.S.ENG., L.R.C.P.LOND.,
 ASSISTANT INSTRUCTOR IN ANAESTHETICS AT THE
 LONDON HOSPITAL, ETC.

THE condition known as status lymphaticus being of great rarity, and one in which the administration of anaesthetics, or the performance of even trivial operations without them, is attended with grave risk to life, I venture to record a case which ended fatally during the administration of an anaesthetic by myself, and which at the time of its occurrence created more than usual interest in the lay press.

History.—The patient, L. H., was a young man, aged 21, 6 ft. 2 in. in height, obviously overgrown, and very thin, of a highly neurotic temperament. He suffered from a condition necessitating circumcision, and the fact of this had been on

his mind for some time. He had suffered from diphtheria two years previously, and had just returned from a prolonged stay in Egypt. He was a great smoker of cigarettes. I learned afterwards that he was rather subject to faintness. His dentist, after the occurrence, wrote expressing regret that he had not known the patient was to have an anaesthetic, as he would have told us that frequently he had to place the patient on the floor, and resort to restorative measures, to recover him from faintness which supervened whenever any painful manipulation had to be done upon his teeth.

Operation.—The operation was fixed for 12 o'clock, and the patient had taken an ordinary breakfast at 8 a.m. He had remained in bed, but had been smoking and inhaling the smoke from cigarettes all the morning. On examination before the administration of the anaesthetic I found a small, rapid pulse, poor chest expansion, and considerable enlargement of the thyroid gland. There was very marked diffuse epigastric pulsation of the heart, but I could detect no adventitious sounds. The patient's condition made me decide not to give nitrous oxide and ether, and I selected O_2 mixture, as being in my view the best anaesthetic in the circumstances. When I began the administration the patient became very agitated, asked for brandy, said he felt faint, and that he "could not stand it." I calmed and reassured him, and he then passed quietly and without a struggle under the influence of the anaesthetic. I noticed, however, that throughout the whole induction period the heart was beating very violently against the chest wall.

Result.—While the patient was still lightly under the anaesthetic the operation was begun. When the prepuce was stretched with forceps, he developed slight crowing inspiration and there was a tendency to draw up the legs. I therefore increased the percentage of the anaesthetic in the inspired air. At this moment the prepuce was severed, and simultaneously the patient turned an ashen colour, stopped breathing, and his pupils dilated. I immediately stopped the administration, asked the operator to compress the lower ribs and restore the respiration, and I performed rhythmic tongue traction and gave nitrate of amyl vapour meanwhile. This treatment quickly restored the patient, and I asked the surgeon to hurry through with the operation, saying that I did not wish to give any more of the anaesthetic, and I accordingly laid aside the inhaler. The parts were rapidly swabbed and a stitch was passed, when again the same symptoms of heart failure returned. All the usual restorative methods were resorted to, but unfortunately they all proved unavailing, and the patient was obviously dead. Artificial respiration was kept up for forty-five minutes, with skin frictions, mustard over the heart, acupuncture, hot-water bottles, amyl nitrate, and ammonia to the nostrils. I may add that when the patient "fainted" on the second occasion I adopted the advice of Dr. Leonard Hill, and for a moment sat the patient up and exerted pressure upwards in the epigastrium, with a view to relieving any engorgement of the right heart that might be present, by encouraging the patient to bleed into his splanchnic area.

Autopsy.—On post-mortem examination, made the next day, the following condition was discovered: The patient was tall, thin, and of sallow complexion, and dark hair. The head was dolichocephalic in form, the palate high-arched. The tonsils not much enlarged. The air passages were clear, the lungs normal, and giving on section no odour of anaesthetic. The thyroid gland was enlarged, and showed degenerative changes. The thymus gland was persistent, and weighed 24 grams; it extended downwards towards the pericardium. The heart was dilated, with thin, flabby walls, showing on microscopic examination considerable fatty degeneration of the muscle fibres. The spleen was greatly enlarged, and there was a supernumerary spleen; both showed on section very great overgrowth of the follicles and connective tissue. In the intestines the Peyer's patches and solitary follicles were excessively developed. The mesenteric glands were all enlarged.

REMARKS.

In reviewing this case I am unable to find any detail of the administration I should alter if I could have the opportunity of giving the patient an anaesthetic again; unhappily this is not possible, and I only hope to learn from the collective experience of the Society how in future I might improve on the methods I adopted. To err is human, and it is only by being told of our mistakes that we can expect to mend them, for we all do what we believe to be best at the time. I trust, therefore, the discussion will bring out points for treatment of these dangerous and unsuspected cases.

One or two points impress themselves upon me. First, with regard to the previous preparation of the patient, I think it is very important not to rush this type of patient into an operation; I believe it would be better to send him into a nursing home for two or three days beforehand so that he might benefit by the moral stimulus of the environment and settle down to the necessary discipline.

In my opinion it is dangerous to allow patients to smoke before taking anaesthetics; there is no doubt that tobacco

* A paper read before the Soc. of Anaesthetists on November 1st, 1907.

depresses the heart, and would inhibit its capacity to recover from shock.

I think the hypodermic injection of morphine and atropine before the administration of the anaesthetic would be of great value, and I regret now that I did not adopt it in this case.

I believe the patient would probably have died even if the operation had been performed under local anaesthesia, whether hypodermically or introspinally applied.

It is on record that these cases have died under ether, and, although ether by the open method suggests itself as an alternative to the CE_2 mixture I administered, I decided against it, owing to the length of time required to induce anaesthesia, and owing to the patient's very nervous and unamenable condition; I feel certain he would have been intolerant of ether.

It has been suggested to me that a dose of brandy given before the anaesthetic would have calmed the patient and strengthened his heart, and would have rendered his nervous system less susceptible to shock. I am inclined to endorse this view, and would value the opinion of the members of the Society upon the point. In my own opinion the heart, by its extreme agitation and excessive action, referred to above, tired itself out, and thus became incapable of withstanding shock, poisoned as it already was, in a measure, by nicotine.

In conclusion, I must thank Dr. Frankish for his kind permission to publish this case, Dr. B. H. Spillsbury for the *post-mortem* notes, and you, gentlemen, for your attention.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL.

A CASE OF DOUBLE DISLOCATION OF THE INNOMINATE BONES WITH FRACTURES OF THE LEGS.

THE following case is of interest as showing what grave injuries can be caused by a severe crush:

On the evening of Saturday, January 4th, a collision occurred near the mouth of the Thames between a steamer and a small sailing vessel. At the time of the collision the steamer was proceeding at the rate of nine knots per hour, and struck the sailing vessel end on. The master of the latter, seeing that a collision was imminent, summoned all hands on deck. The ship's cook, aged 17, was in the fore-castle, was coming up the hatch, and partly out, when the collision occurred. He was caught by the legs and middle of body, and pinned down between the coaming of the hatch and the windlass, the latter being driven on to him by the force of the blow. He was dragged clear before the vessel sank, but died a few minutes later.

I saw the body about 10 p.m. that evening. Both legs were fractured below the knees. There were some abrasions on the face, and considerable bruising all over the abdomen, hips, loins, and scrotum, and blood had issued from the external urinary meatus. On moving the legs, by grasping the thighs separately, the corresponding innominate bones moved with them.

The *post-mortem* examination showed that both innominate bones had been torn away from the sacrum, leaving a gap over an inch broad, and extending deeply on each side. The two sides of the symphysis pubis were separated by half an inch. In the pelvic cavity there was some effused blood, the bladder empty, and the urethra ruptured. The small intestines and liver were contused, but the other organs were uninjured.

What had happened was this: The man was partly out of the narrow companion when he was caught—his legs between the back coaming of the companion hatch and the ladder, his pelvis between the heavy windlass and the front coaming. The force of the crush, acting from behind forwards, would squeeze and flatten the pelvis, drive the innominate bones apart, and thus cause the sacro-iliac synchondroses and the pubic symphysis to give way, these parts being in a young person obviously the points of least resistance.

J. S. WARRACK, M.A., M.D. Aberd., D.P.H. Camb.
Gravesend.

A RARE CASE OF SCURVY.¹

A case of scurvy not having occurred in the navy for many years, except perhaps in polar expeditions, the following case, which came under my observation and treatment on board H.M.S. *King Alfred* on the China station, is of some interest at a time when much attention is being paid to the subject of dietetics, while the differences of opinion which exist as to the proper amount of carbohydrates, proteids, etc., which ought to be ingested, may be illuminated by description of the peculiar idiosyncrasy which undoubtedly gave rise to the symptoms from which the patient in this case suffered.

History.—The patient, a private marine, aged 23, presented himself complaining of much soreness of the mouth with a tendency to bleeding from the gums, and also of lumbar pain and weakness. He had always been healthy till quite recently. He had lived in the country till 16 years of age, when he entered the Royal Marines. As a boy in the country he lived entirely on milk, cheese, and bread. He had an extreme distaste for meat in any form, and a rooted objection to vegetables and fruit. Whilst serving on this station, where he has been for about eighteen months, his principal food consisted of bread and butter and cocoa; he very rarely touched meat and never used the ration of potatoes supplied. He occasionally supplemented his diet by cheese and sardines procured from the canteen.

State on Examination.—He was sallow and cachectic-looking in appearance, and his gums were purple in colour, especially at the edges; they rose up between and around the teeth, and showed a tendency to bleed. The breath was offensive. Both legs were covered with petechial spots, and the left knee was somewhat swollen and bruised-looking, although there was no history of injury.

Progress.—In a few days an ecchymosis made its appearance over the left knee, and later on the neighbourhood of the right knee was affected in a similar way, and subsequently the left instep was affected. He also had some slight epistaxis. His temperature for fifteen days, during which time he was confined to bed, ranged between 99° and 102°.

Treatment and Result.—A microscopic examination of his blood revealed nothing abnormal, and a blood count was also practically normal. He was confined to bed at first, and a liberal diet of fresh vegetables, fruit, and lime-juice insisted upon. Fresh meat was also employed in small quantities. At first he had some difficulty in taking this diet, more especially the vegetables and fruit, but he gradually came to tolerate them, and now, convinced of its efficacy, he consumes regularly a fair amount of vegetable food. Under this dieting his condition rapidly improved, the condition of the mouth became normal, the petechial spots and patches of ecchymosis disappeared, and he became less sallow and cachectic-like in appearance. He was discharged to duty after twenty-one days' treatment.

REMARKS.—I am convinced that this was a case of true scurvy, and not a case of purpura, from the condition of the mouth, from the history of the patient's mode of dieting, and from the marked beneficial results of a liberal vegetable diet.

JOSEPH CHAMBERS, B.A., M.B., B.Ch. Dubl.,
Fleet Surgeon, R.N.

FORMALDEHYDE IN ALOPECIA AREATA.

I was consulted, a little while back, by a young girl who had a circular bald patch of about 3 in. in diameter on the scalp at the side of the occiput. The patch was perfectly hairless, smooth, and shining.

The treatment consisted in painting it with a 20 per cent. solution of formaldehyde. This was done every day for the first week or two, until signs of inflammatory reaction appeared. The treatment was then suspended, and a sedative ointment applied. When the inflammation subsided the formaldehyde was again continued, stopping the application as soon as inflammatory trouble appeared. This routine of treatment was persevered in for about six or nine months. About this time a growth of hair made its appearance, continued to grow, and in every way corresponded with the surrounding hair.

I have seen the patient recently—twelve months after treatment—and the growth of hair is perfect.

I have looked up the medical books and literature on the subject of alopecia areata, and find no mention of formaldehyde in the treatment of this—very often—intractable and difficult disease. The treatment by formaldehyde has proved successful in my hands.

Abertillery.

J. J. McINERNEY, L.R.C.P. and S.I.

¹ Forwarded by the Director-General of the Medical Department of the Royal Navy.