of them that they would not eat the flesh of bears, and that they were rather sought by the bears than the bears by them, and that they remained lethargically in their hut, during most of the winter.

Sir John Ross has stated that, in 1633-4, seven Russian shipwrecked seamen remained a year in Spitzbergen, as Pelham's party did in 1630-1; but the manner in which they were housed, the food they had, and the results as to scurvy, are not noted by him. And again, he states that in 1743-9, six Russian sailors were left at Spitzbergen, and remained there six years. We may rest assured that the flesh of reindeer, bears, seals, and birds was then as obtainable as it was before and has been since then.

In what then, it may now be asked, did their conditions differ from those of the *Alert* and *Discovery*'s crews, kept for an equal period of one winter within decks, breathing an atmosphere, always impure, and the more so while crowded together at night? Else how can it be satisfactorily explained that, in so many instances of the most extreme exposure in Arctic regions, men do escape scurvy, as in the instances of Hayes's party from Kane's ship, in 1854, in Smith's Sound; of Hull's, in 1872, in the same place; of the *Hanse's* crew, on the east coast of Greenland, through the winter of 1871-2, while they were drifting 1,500 miles on the ice through eight months, none of whom had any other shelter than was afforded them by tents or huts, living mostly in the open air, and subsisting chiefly on the animal food they could obtain by exertion of their muscular systems?

Do not these instances indicate, I would ask, that in Arctic regions Europeans are more healthy when they are of necessity assimilated to the natives in their conditions of living, than when they are cooped up and breathing an impure atmosphere generated between the decks of a ship? Even Ross found, so early as 1834, that, after his people had suffered greatly by scurvy through two winters, the last of four, they all improved remarkably in their last four months, while they were living in tents, or travelling on sledges ashore, and in boats afloat, when, in all human probability, another winter passed in a ship would have proved fatal to them all.

And, lastly, where the *Eira's* crew survived a winter, in 1881-2, in huts in health, the crew of the *Tegethoff*, in 1872-4, confined to their ship drifting in the ice, although they were not without the flesh of bears and walruses, suffered in both winters from "scurbutic affections of the mouth and diseases of the lung, sometimes in distressing shapes, and scarcely a day passed without one or two on the sick-list," although they were not without raw potatoes and lime-juice, in the second winter, as antiscorbutics.

In view of these facts and circumstances, I infer that the higher development of the scorbutic diathesis amongst the crew of the *Alert* than of the *Discovery* of 1875-76, may be ascribed, as Sir George Nares maintains, first, to the smaller amount of fresh animal food obtained by the *Alert's* crew; and, secondly, to the moisture of the heated air in the dwelling-deck, owing to the difficulty of keeping up a steady renewal of it, instead of breathing the same over and over again, laden with an excess of carbonic acid and vapourised excreta from the lungs and skin, when her crew would seem to have taken less of exercise outside the ship in a pure atmosphere, than the *Discovery's* did.

As it was with the *Hecla* and *Fury* from 1822 to 1824, so it was with the *Alert* and *Discovery* in 1875-76, and so it may be expected to continue, until the science of naval engineering shall have devised means of supplying steady currents of warmed air, drawn from outside the ship, heated in a chamber, and equally distributed from it to the interior by fanners, after the manner of ventilation employed in ships of the *Devastation* construction. On the Committee of Inquiry into the outbreak of scurvy in the Nares expedition, Dr. Fouzer put many questions directly bearing on this point (*Vide* Report of Committee, p. 21).

In summary: Prior to Parry's second voyage in 1822-24, no crew passed a winter on the ice without scurvy; but then, and generally since then, a first winter has been passed free from it, with sometimes an isolated case or two; and second winters have been exempt with a moderate supply of fresh animal food. After that, the constitutions of the men will be so predisposed that, notwithstanding present supplies of fresh animal food, the scurvy may be expected to show itself at any time, even in summer, on the impulse of exciting causes, such as prolonged severe labour, or deep disappointments, or other reasons for moral depression. A warm damp atmosphere between decks, assisted by imperfect ventilation from the external purer air, is an effective predisposing and exciting cause. Several instances have shown that castaways on the ice, dwelling in huts, and providing themselves, more or less, with fresh animal food in the winter, have sustained life, and kept free from scurvy, which appears dependent on fresh-meat diet and pure air. To approximate these conditions in ships, it would be desirable to ventilate them with warmed pure air from without, on the

fanning system employed in war-ships, which may also be adapted to keep carcasses fresh in cool apartments, as in the Australian trade in meat. In every case a fuller diet on animal food is requisite to maintain health in the regions of ice; and the raw flesh, fat, and blood of indigenous animals have been proved to be highly antiscorbutic and remedial, without vegetables. Lastly, in Arctic, as well as in tropical, regions, it is more healthy to Europeans to assimilate their diet to that of the natives, than to adhere closely to the habits of milder climes.

In conclusion, Dr. Lind, when overthrowing the theories of his day with regard to scurvy in fleets, adopted the maxim of "*Dies docet diem*," which to a certain extent is, I consider, applicable in our own day. I have brought together evidence which seems to me to show that, in the Arctic regions, the compulsory enjoyment of dry fresh air, with the necessity to obtain much of fresh animal food from indigenous animals, is more conducive to health and the avoidance of scurvy, among castaways, than life in ships, where men dwell in a warm, moist, and vitiated atmosphere, and are fed on the best of ships' diet, with lime-juice as an antiscorbutic, but without the advantage of much fresh animal food, which is second only to fresh vegetables in the prevention of scurvy. And to that extent I concur in the principles of the recommendations offered by Dr. W. H. Neale, whose experience was acquired in the voyage of the *Eira*, in a single winter on Franz Josef Land; but how far these would be found efficacious in a second winter in regions of ice still remains to be proved.

In 1772-3-4, Captain Cook proved that, by sanitary measures, especially by ventilation that prevented dampness, with early attention to the sure means of subduing the nascent scorbutic diathesis, by visiting places where fresh animal and vegetable diet was attainable, the fatal type of the disease was not established; but it must be remembered that he sailed in the tropics, and not in the Arctic regions, where the conditions of life are totally different, where fresh fruit and vegetables are unseen, and fresh animal food is at the best an uncertainty.

A CASE OF BLEEDING FROM THE TRACHEA, SIMULATING PULMONARY HÆMORRHAGE.

By EDWARD T. WILSON, M.B. Oxon., F.R.C.P.,
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THE subject of this paper is a gentleman, aged 61. The account given of his health is not satisfactory. For years, as far back as he can remember, he has suffered from dyspepsia, flatulent eructations, and habitual constipation; of late years, also, from fits of giddiness, which come on without warning. When about thirty years of age, he strained himself while exercising with dumb-bells, and this was followed by slight hæmoptysis. The hæmorrhage recurred ten years ago, after violent exertion in sawing a tree; and at intervals since it has appeared, accompanied by pain at a spot under the left clavicle, "where," he has been told, "there are adhesions." Ten years ago, there was an attack of left-sided hemiplegia, from which he rapidly and completely recovered. The urine is frequently loaded with lithic acid deposit. A year before he came under my observation, an abscess, or rather a carbuncular swelling, brawny and hard at first, afterwards suppurating, formed on the left side of the neck. Fluctuation is described by his then medical attendant as being very indistinct, while the excessive swelling and oedema threatened asphyxia, until relief came by the spontaneous bursting of the abscess into the trachea. It was also opened externally. Recovery followed, leaving no other results than a huskiness of voice, which remains to the present time. The patient has been much abroad, but has never resided long enough in hot climates to contract disease of any special kind, and there is no history of either struma or syphilis.

I first saw Mr. C. on March 21st, 1882, for an attack of giddiness and dyspepsia. He was very anæmic, and complained much of flatulence and eructations, which interfered with the heart's action. The voice was husky, but there were no remains of his paralytic attack, except, possibly, deafness of the left ear, which is complete, and due to impairment of the nerve. The tongue was loaded, the bowels constipated, the conjunctiva rather yellow. The pulse was weak, with frequent intermissions; heart's action weak. There was dilatation to some extent, and a slight mitral bruit. He complained of pain under the left clavicle, and, on examination, a small but well defined spot of dulness was found, with a few moist sounds over the same area. The urine contained a considerable deposit of uric acid and oxalate of lime; its specific gravity was 1017, and there was no trace of albumen. The case seemed one of gouty dyspepsia, with torpid liver and flatulence, impeding a weakened heart, and so causing the giddiness and discomfort of which

¹ Read before the Worcester and Hereford and Gloucestershire Branches.

he complained. Much benefit was derived from the use of the mineral acids and strychnia, combined with a diet restricted to fish and white meats in reasonable quantity. On March 29th, however, a few dark clots were hawked up, together with some tenacious mucus; and, on April 6th, he was suddenly seized in the night with profuse hæmorrhage, which bore all the appearance of coming from the lungs. The blood was frothy and florid; there was frequent cough, and he complained of tenderness over the spot, before described as dull, under the left clavicle. There were moist râles at the apex of the left lung, with marked increase in the expiratory sounds. Next day, the bleeding was still going on slightly, but it came up in dark clots. Both diagnosis and prognosis were extremely doubtful; and, as the patient was about purchasing a valuable property, the latter was of some importance. Advantage was taken of a brilliant sun to make a laryngoscopic examination; and I was at once enabled to give my patient reasonable hopes of recovery.

The trachea was well shown down to its bifurcation, and the source of the hæmorrhage was seen to be in an ulcerated surface, about half an inch above that point. Other ulcerations, ragged and dirty in character, extended upwards, partly involving the arytenoid folds, and the surface of the epiglottis. At the same time, the left vocal cord was found to be partially paralysed, while the right came far over the median line in phonation, giving rise to the huskiness before remarked in the voice.

The treatment consisted of lithia, and nux vomica with charcoal for the dyspepsia; and for the throat, a spray of sulphate of zinc, by means of Sieglé's machine, and carbolic acid with iodine in an antiseptic respirator. The hæmorrhage soon subsided, and in the course of a week healthy granulations appeared over the ulcerated surfaces, and spray of tincture of iron was substituted for the zinc. By May 12th nothing remained save a white cicatrix, which marked the site of the original opening of the abscess into the trachea, and a nearly complete paralysis of the adductors of the left vocal cord. What the precise cause of this may be is doubtful. The huskiness dates back to the time of the abscess, while the lung-mischief and the cerebral also preceded this by many years. It seems probable, therefore, that some injury may have been done at that time to the recurrent nerve of that side. The paralysis gives little inconvenience, as the compensation by the right cord is so complete. The general health improved gradually under the use of mineral acids and "fer Bravais;" and I had an opportunity of satisfying myself a few weeks ago that the trachea remained sound and healthy. The patient was then suffering, however, from nose-bleeding to a large extent, which proceeded from the point at which a polypus had been removed by operation some years before. There is evidently, therefore, a strong tendency to the re-opening of old wounds under the influence of debility; but I am not aware of any other symptom indicative of a hæmorrhagic diathesis. No direct treatment was addressed to the paralysed vocal cord, as the patient objected to it; and the chances of improvement under faradisation were so small as not to warrant any great insistence.

I have thought that the case might have some interest as showing how the laryngoscope may be the means of clearing up an obscure point in diagnosis, and giving precision to treatment which otherwise might have been hesitating, or even hurtful.

NON-GRAVID HYDRORRHŒA.

By JAMES OLIVER, M.B. EDIN.

THE discharge of fluid of a watery character from the gravid uterus is a condition which has frequently been noted; it is rarely, however, that the opportunity is afforded for the careful scrutiny of this somewhat singular affection in the unimpregnated state.

On several occasions, I have had described to me by patients the sequence of events associated with this anomalous secretion; and, lately, having closely observed a case, I deem it worth while to bring the subject under the notice of the profession.

The patients suffering from this peculiar affection are usually of a nervous temperament, and are liable to suffer from any of the many states associated with this condition of body.

The fluid discharged is somewhat milky, with a specific gravity about 1008, alkaline in reaction, containing no albumen, but a fair amount of chlorides. Microscopic examination reveals only epithelium and epithelial debris. The quantity of fluid so discharged varies; as much, however, as six ounces may be expelled at one gush, and the expulsion of like quantities may be repeated at intervals of four or six hours.

The circumstances attending this watery discharge are variable. In

some cases, it is associated with pain in the hypogastric region, similar to the pain which many patients experience prior to the appearance of the menstrual flow. It is frequently followed by a "bearing-down pain," which soon passes off.

The cause and origin of this very anomalous discharge are questions of great interest; and, as the fluid may escape drop by drop, or in considerable quantity, it has yet to be determined whether it accumulates in any part of the genital tract before finally being expelled. So far as I have been able to judge, it does not seem to me to accumulate anywhere, but to escape immediately it is secreted.

Many theories have been promulgated to account for the like phenomenon occurring in the gravid uterus; and doubtless as many, if not more, may be forthcoming for the explanation of hydrorrhœa in the unimpregnated state.

It is possible that the discharge may come from the Fallopian tubes; this, however, I am inclined to discard. I will, however, venture to suggest that the uterus itself is the medium; and that the change occurring in this organ is comparable with that occurring in the kidneys during the secretion of the so-called hysterical urine. It is, therefore, most probably dependent upon some derangement of innervation—whether through the vaso-motor nervous system, or directly through those nerves which are supposed to preside over secretion, can as yet only be conjectured. I am, however, inclined to believe it is by a direct influence on the nerves of secretion.

CASE OF IDIOPATHIC GANGRENE: RECOVERY.

By WILLIAM PROWSE, M.R.C.S., etc., Clifton.

THE following case of spontaneous mortification in a man, aged 54, apparently healthy, i.e., free from gout or other hereditary disease, which might be considered the immediate forerunner, will be read with interest by the profession. The disease is not often seen in one so comparatively young.

From the first, I looked upon the attack as having been induced solely by loss of nervous power, brought on by misfortune in business, producing extreme depression of mind for a prolonged period. This state had reacted on the body, and led to impaired nutrition. Diabetes was the result, and an enfeebled circulation.

In July, 1880 I was called to attend W. H., aged 54, a master builder, of a florid complexion and healthy appearance, but with a settled look of dejection on his countenance, caused, doubtless, by the unfavourable prognosis that had been passed upon him. The man had been an in-patient of Addenbrooke's Hospital for three months, and, at the time of his coming under my care, had been made an out-patient. His temperament was sanguine; his habits were strictly temperate; he had always been in good health before this attack. The three outer toes of the right foot were gangrenous, the slough extending to a semicircular patch immediately behind them. The deepest structures were affected, and the line of demarcation distinct. The terminal phalanges had already sloughed away. The pulse was 96, feeble, intermittent. His appetite was good; his sleep fitful, the nights being much disturbed. The urine contained much sugar, five to six pints being voided in the twenty-four hours.

The treatment consisted in the administration of repeated small doses of solid opium—half a grain every eight hours, absolute rest, a generous diet, with a moderate allowance of sedatives in the shape of porter and whisky. This course was pursued with little variation for five months, by which time the remaining phalanges had separated, and the wound healed perfectly. The only local application used was the saturated solution of salicylic acid, applied after the manner of a water-dressing. The one medicine prescribed proved of the greatest benefit, and most benign in its influence on the general condition of the patient, and his health steadily improved in every particular. The urine became normal in quantity, and free from sugar, at the end of three months.

I had formed the most favourable opinion as to the ultimate result, and this must have had the best effect on the recovery of the patient, which, I am happy to say, was complete.

Amputation was uncalled for and unnecessary. I considered it of more importance to give the patient the benefit of a long continued rest, and time to recover his impaired functions, than to effect a rapid removal of the diseased part with doubtful results. The history of the case demonstrated it to be one of lowered vitality induced by the prolonged mental troubles, and the greater physical exertion the patient was called upon to undergo.