pericardium was now picked up and a vertical incision was made in it. Very little fluid at first escaped, but when the finger was insinuated between the right auricle and the pericardium and between the left ventricle and the pericardium cloudy fluid escaped in quantity, which on bacteriological examination was found to contain a short streptococcus. Glove drains were inserted to the right and left inside the pericardium and the wound was closed.

April 23rd: Breathing and cough much easier; drains removed. Pulse and temperature now gradually fell and the wound healed by first intention. Four weeks later he was evacuated to England. The cough and dyspnoea had disappeared, the cardiac dullness was much less, and there was no friction.

Subsequent inquiry two months later showed that his improvement was maintained.

THE MOLYBDENO-TUNGSTEN ARC IN THE TREATMENT OF VARIOUS SUPPURATIVE LESIONS.

(As used at a Divisional Rest Station and a Stationary Hospital, Italian E.F.)

BY B. MICHELL YOUNG, M.R.C.S., L.R.C.P., D.P.H.,
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THE very numerous cases of old wounds, ulcers of various parts of the body, carbuncles, inflammations of the cutaneous tissues, and such like, have presented many difficulties to obtain rapid healing. Many methods have been employed with more or less success to lessen the period during which the man is incapacitated from duty. In March, 1917, I first used the molybdeno-tungsten arc on skin lesions, and suggested that it should be employed for the treatment of this class of case. The lamp was erected first at the divisional rest station, the necessary current being obtained from a repair-motor lorry's engine situated some 400 yards away. This was satisfactory. Afterwards it was connected to the town-supply at the stationary hospital.

The cases selected for treatment were chiefly those which were of considerable duration and which showed little or no improvement obtained by previous methods of treatment. The exposure given was generally three minutes at a distance of 50 cm. from the arc. The dressings used were practically in all cases of gauze damped with sterile water; in a few normal saline was used. This was adopted as it was desirable to eliminate any cause of improvement, or the reverse, other than the effects of the ultra-violet rays produced by this arc. I am basing my remarks on my own experiences and on a series of cases treated by Lieutenant-Colonel Wells, to whom I am indebted for kindly forwarding to me his notes and observations. In considering the various effects and non-effects produced, the cases tend to group themselves into acute lesions, stationary or inactive lesions, and chronic. In the acute lesions, frost-bite, carbuncles, large areas of inflamed and ulcerated skin responded readily. A series of frost-bites especially, with loss of tissue, afforded effective comparison, as only one limb was exposed to the light, while the other was treated with the usual methods. In every case the light caused prompt healing in about eight days, while the other remained unhealed. In 38 cases of generalised sores many were healed more speedily by this method of treatment.

Ulcers of heels and toes require relatively more exposures according to the length of time they have acquired their indolent condition. But once the effect is produced they steadily progress in the process of repair. Occasionally a case is met which refuses to respond. For this I can advance no reason; one such occurred in this series—possibly specific.

Taking the whole series, the exposure of three minutes is sufficient in the first group and good results were obtained, but this should be increased even to causing erythema of the surrounding tissues, until evidence of activity in the sores is produced in those obstinate cases, and possibly more rapidity of healing would be obtained. Cases of bubo which had been incised were treated from the outset with daily exposures of three minutes, and each healed in eight days, leaving a narrow healthy linear scar, comparing favourably with cases treated in the usual way; and my experience shows that, speaking generally, there is an absence of thickening and puckering in cases so treated.

Some patients develop an erythema in the surrounding skin (especially those of the fair type) in response to the

light, but increase of distance or interposition of the quartz globe neutralises this effect. The skin soon becomes tolerant, when full exposures may be given.

The lamp now employed is known as the "meridian" automatic feed arc fitted with the new molybdeno-tungsten electrodes. It is connected in the usual manner with the ordinary house supply, and is a suitable contrivance for all voltages above 100 volts, both direct and alternating current. The observations which these cases afford lead one to the opinion that this method of treatment is useful for shortening the incapacity for duty.

A PLASTIC VOCAL CORD.

BY FERRIS N. SMITH, B.A., M.D. MICHIGAN,
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THE following case is reported because of the unusual possibilities which it suggests at this time, when many cases of traumatic aphonia are added to the usual list of such cases resulting from disease. The technique was quite original; no similar procedure has been found or suggested in the literature. The patient is the secretary-manager of a large home for aged Dutch people, and was in excellent health when last heard from in June, 1918.

J. C. H., aged 62, came for examination in January, 1917, on account of rapid loss of voice, some referred pain radiating to the right ear, and slight loss of weight. He gave a history of removal of a small mass from the right vocal cord and cauterisation three years previously. Inspection revealed a nodular, rough mass about the size of a split pea at the mid-portion of the free margin of the right true cord; this prevented apposition of the cords, causing the loss of voice. A small specimen for examination was removed through the laryngoscope. The pathologist reported "squamous-celled carcinoma."

In view of the previous history and findings a radical operation—hemilaryngectomy—was indicated, but on account of the man's occupation, which necessitated the retention of some speaking voice, I was loath to follow this procedure. The posterior end of the cord with its arytenoid attachment was apparently free from infiltration, and offered a foundation for the procedure which was carried out. There was a great deal to gain and very little to lose in the effort to reconstruct this vocal cord before resorting to the radical procedure. Further, any healthy mass of tissue which could be put in the cadaveric position of a vocal cord would furnish an abutment for the functioning cord and ensure spoken voice. The functioning arytenoid offered hope of some motion.

With the above considerations the following operation was conceived and executed in two stages at the Blodgett Memorial Hospital, Grand Rapids, Michigan, in February, 1917:—

Stage 1 consisted in the dissection and packing of neck structure about the larynx to produce an inflammatory barrier against infection of the deep planes of the neck after opening the airway and preparing the distal end of a flap to imitate the form of a vocal cord. This was done by making two short incisions to outline the lateral borders, dissecting the skin free from underlying tissues, planting a small piece of cartilage, and suturing a tuck or fold in the skin to include this cartilage. The crest of this fold was three-eighths of an inch above the normal skin level. The balance of the flap was not dissected until the second stage of the operation.

At the second stage a laryngotomy was performed, and the anterior three-fourths of the cord, with all soft parts in a wide area extending down to the thyroid cartilage, was removed. The skin flap, with a broad base in the supra-scapular region of the right neck and its prepared distal end just above the right nipple, was dissected. The distal end was trimmed to fit in the denuded area of the larynx in such a manner that the fold containing cartilage assumed the level of the former cord. It was sutured to the cord stump on the arytenoid and border soft parts with horse-hair. A tracheotomy-tube was inserted through the upper two tracheal rings and the larynx packed with bismuth paste gauze. The larynx was held slightly open with a Jansen mastoid retractor. The skin opening of the neck and chest was closed by undermining and sliding the skin.

The patient was placed in a bed which was considerably elevated at the foot. He was fed with a gastric tube. The skin flap was covered with warm, constantly changed, boric compresses, and the larynx was dressed twice daily.

On the eighth day the mid-portion of the pedicle of the flap showed signs of withering. This was resected on the ninth day, part of the base being returned to the neck. A small part of the inferior border of the larynx implant

sloughed, but this was not in a position to vitiate the result. The tracheal tube was withdrawn at this time and the larynx and neck closed, excepting the tube tract, which was lightly packed. Subsequent recovery, except for a mild bronchitis, was uneventful.

The patient had a hoarse, whispering voice immediately upon closure of the larynx. The voice quality constantly improved with the disappearance of the local reaction until it was functionally excellent, only a slight huskiness remaining.

Several improvements in technique have occurred to me since seeing the plastic work of Major H. D. Gillies at Queen's Hospital, Farnham, Sidcup. His method of tubing a long pedicle by suturing its raw edges would undoubtedly prevent the gangrene which occurred in my flap, and leave a clean, healed neck to deal with at the time of the major procedure. The distal end of the flap should be completely outlined by skin incision and resutured in place to increase its blood-supply, and the cord accurately reproduced, even to a thin edge, by shaping a piece of costal cartilage instead of using the thin septal cartilage. This should be done in the first stage.

The method is applicable to cases of hemilaryngectomy, either surgical or traumatic, if three stages are employed, the second stage to consist in removal of the diseased or scarred portion of the larynx and lining the deficiency with skin, leaving for the third stage a shaped cartilage implant to give stability to the larynx box and an abutment for the functioning cord.

Medical Societies.

ROYAL INSTITUTE OF PUBLIC HEALTH.

Discussion on the Prevention and Arrest of Venereal Disease in the Army.

A SPECIAL conference was held on Jan. 8th.

Lord SYDENHAM, chairman of the National Council for Combating Venereal Diseases, who presided, said that medical science in all its branches had been powerfully stimulated by the war, and victory had been gained over many of those diseases which used to cripple armies in the past. We understood now better than ever before that medical science and sound administration must always go hand-in-hand, and together could produce an immense improvement in public health. Public health and the happiness of the people went together. In so far as venereal disease could be arrested in the army it must be an immense gain and protection to the civilian population. During the war there had been an increase of infection among that population which would increase the risks to demobilised men.

The Policy of Silence.

Professor J. G. ADAMI, Colonel, C.A.M.C., read a paper opening a discussion on the Prevention and Arrest of Venereal Disease in the Army. He said that the performance of a physiological function which the individual in his heart of hearts knew to be in itself natural and desirable had to be regarded and taught as contrary to good morals. We found ourselves torn asunder between Peter and Paul; the Peter that is within us teaching us that what God has given us is clean and is to be enjoyed; the Paul, that woman is a snare and that even a bishop should have but one wife—and scarcely that. And as youth was largely irresponsible and the sense of social duty a plant of slow growth, which in some throughout life was choked by the weeds of personal predilection, it had followed that the whole matter of sexual conduct had for generations been surrounded with an atmosphere of insincerity, not to say hypocrisy. The "dead hand" of training began in early childhood, whereby we were taught to regard the open discussion of sexual matters as taboo; and there was the "dead hand" of schoolboy "form," according to which public acknowledgment of one's standing in relationship to moral matters, save on the part of those who had donned the cloth and become professional moralists, branded one as either a prig or a humbug. Happily, we were passing out of this phase.

What this policy of silence had cost the country and the Army during the last four years was awful to contemplate.

Before the war the annual reports of the Director-General had warned the Government as to the prevalence of venereal disease in the Army; a quarter of all admissions to hospital were due to this cause, but, with the war, no steps had been taken to render the regulations against harlotry more rigid. Our men had been in the venereal hospitals not by companies but by battalions. Each case had meant two months and more on the sick list, and weeks and months before the individual could be restored to full vigour at the front, if, indeed, there was not left a legacy of rheumatism, eye disease, and enfeebled general health.

The Position during the War.

When in the autumn of 1914 the first Canadian contingent arrived upon Salisbury Plain it was found that the Common Law of England and the Military Law were equally impotent to cope with the condition of affairs revealed. Harlotry in England seemed to be a protected but not a controlled profession. This, however, was also largely true of Canada, but the Canadian authorities did expect that in England in war time they would get willing help from local and London authorities in protecting the soldier. Of help there was little. Each week-end there poured into Salisbury Plain from London from 80 to 100 loose women, and it was not until under the Defence of the Realm Act in 1916 that the naval and military authorities in one area, where there had been a large outbreak of venereal disease, were empowered to transport out of that area those directly or indirectly concerned in the profession of prostitution.

He was convinced that the policy of frank dealing and open speaking on the subject was the only one that would improve conditions. Even at this late hour he begged the National Council for Combating Venereal Disease to influence the Government to publish a statement regarding the venereal situation in the Army in successive years of the war, in the different regions—at home, France, Mesopotamia, and the like—so that the country might know the extent of the trouble as it affected the Army, and, simultaneously, to obtain powers to make an investigation in selected areas or classes of the population into the frequency of either syphilis or venereal diseases in general in those areas or classes. Let the situation be known and faced. Had the medical profession, the National Council, and the Government spoken out at the beginning of the war the well-being and happiness of the country and the conditions of our troops would to-day have been very different from what it is. In 1912, before the war, the Surgeon-General at Washington had published outspoken regulations directing all soldiers returning to camp to state whether they had exposed themselves to the possibility of venereal infection and detailing the early preventive treatment to be given to those who had been exposed. This he (Colonel Adami) had reported upon to the War Office, but the "dead hand" had prevented its adoption for close on two years.

Preventive Measures and their Results.

With regard to the methods in vogue in the overseas military forces of Canada it had been found in practice that there was no one procedure which was effective in arresting venereal disease in the army; it was necessary to employ a combination. The Director-General had put into force all the methods save one (court martial)—education, warning, recreation, diversion, protection, isolation, prophylaxis, and penalties.

With regard to early treatment every Canadian orderly medical room in England was an early treatment centre, open day and night, with trained N.C.O.'s to supervise and see that the soldier carried out fully the instructions given. For those on leave in London there were open day and night two early treatment centres, at Southampton-street and at Victoria, and another treatment was given on their return to their units. The Dominions worked together, and if no Canadian centre was open the men could go to an Australian or New Zealand centre. The Canadian authorities in their talks to the men on parade made a point of emphasising that neither prophylactic nor early treatment assured absolute immunity to venereal infection. Experience had shown that even under expert supervision no procedure was free from occasional failure. The Canadian authorities firmly believed that if the Army and the populace in general were advised that absolute deterrents existed when this was not the case, there