function of the mucous membrane or at its fibrosis. If the desquamation is slight and the discharge little and not offensive, regeneration should be aimed at. The mucous membrane is cleansed with peroxide, one volume in saline, and if the discharge is alkaline an acid pack is introduced into the nose. This may consist of the following:—

R. Glycerine acid. boric ... 2 oz.

Wool to be soaked in the above solution and packed into the nose twice a day.

In certain cases, glucose may be added to the above.

As soon as the discharge becomes neutral, the nose is douched with liquid paraffin and is kept moist with this, the secretions being tested for alkalinity at intervals and a watch kept upon the sinuses lest they refill, in which case they should again be washed out.

TREATMENT OF ESTABLISHED ATROPHIC RHINITIS.

If the discharge is offensive, if the mucous membrane is shrunken, ulcerated, or the degree of desquamation is so excessive that recovery cannot be expected to take place, we aim at inducing a fibrous atrophy. The nose is cleansed with packs, oily douches being used in addition to the lavage of the sinuses. When clean, a pack of dilute argyrol is placed within the nose and this is followed by peroxide douches to remove the crusts which form. After each douching with peroxide, oil is instilled into the nasal airway and a repetition of these treatments induces such fibrosis that when the fibrous tissue has contracted, the mucous membrane is functionless but dry. In the established states of atrophy it is generally unwise to perform any major operation on the nasal structures for they react extremely poorly to the trauma of the operation.

THE TYPES OF ATROPHY ASSOCIATED WITH SYPHILIS.

There is no need to reiterate the necessity for the performance of a Wassermann reac-

tion in all cases of atrophic rhinitis in which the bony lesions are in excess of those which affect the nasal mucous membrane.

SUMMARY.

The facts which I have placed before you can be summarized in the statements that in hypertrophic rhinitis the infection is by micro-organisms of the type which are destroyed by leucocytes; that the resistance is high; that the processes of regeneration are excessive and those of destruction minimal; that treatment aims at finding the cause, whether it is intrinsic in a sinus, or extrinsic from some infected member of the family or from industrial conditions. When the cause is found the hypertrophy disappears in time. Operations are rarely necessary and patients stand them well. The symptoms are exclusively nasal throughout the complaint.

The atrophic states, on the other hand, are characterized by symptoms which are for the most part, those of failing general health. Symptoms referable to the nose are rare. Destruction of the nasal mucous membrane exceeds repair and operations on the nose are contra-indicated except in states of urgency.

MALIGNANT DISEASE OF THE PROSTATE AND BLADDER.

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CONFINING our description to the carcinomatous variety of growths, it would appear that prostatic cancers are primary growths and are not degenerative processes. Analysis shows that, whilst cancer and benign hypertrophy of the prostate occur at about the same period of life, in nearly half the cases of carcinoma there is no evidence that benign hypertrophy exists.

Microscopically these tumours are most

often spheroidal-celled carcinomata, with usually a considerable amount of fibrous tissue formation, in consequence of which the adenomatous appearance of the neoplasm often undergoes great modification. But whilst the carcinomatous cells become separated into groups and columns between masses of fibrous tissue, enough of the adenomatous formation generally remains to give it a characteristic appearance.

Malignant growths of the prostate usually commence in the posterior part of the gland, close to the capsule, where it can be palpated by a finger in the rectum. Owing to the abundance of fibrous tissue the growth is hard and, on section with a knife, may cause a "gritty" sensation comparable to scirrhus growths in other situations. From its origin in the posterior part of the prostate it spreads slowly, and advances along the planes of least resistance. The prostate lies within a well-marked fibrous sheath which opposes a definite resistance to the progress of the carcinoma and forces it to extend in those directions in which the sheath is not so strong. Thus it advances upwards behind the trigone of the bladder, involving the ends of the vesiculæ seminales and vasa deferentia; it creeps downwards along the membranous urethra; whilst in the anterior, posterior, and lateral directions its progress is confined by the fibrous sheath of the prostate. Consequently the interior of the bladder and rectum is rarely involved, except in some cases which are far advanced; in some instances, even, the cancerous mass has been found to surround the rectum without penetrating it. Involvement of glands occurs but, as a rule, not at an early stage of the disease, and metastases may occur often in bone, but opinions vary as to how early this may happen. Routine examination of cases by means of X-rays to all parts of the body suggests that bony metastasis is rather more common and is not such a late occurrence as is usually thought.

Most of the malignant growths of the bladder are carcinomata and occur in three

types. There has been a good deal of confusion as to the terminology of these tumours, and one or two of the names have been used indiscriminately to describe the various types. The best way is to speak of malignant papillomata, papillary carcinomata, and carcinomata, using these terms in the following senses: malignant papilloma to mean a papillomatous growth of the bladder of innocent origin which has degenerated and acquired malignant characteristics. Such changes may occur at any part of the papilla, from base to apex. A papillary carcinoma is a primary carcinoma of the vesical mucosa from which papillary outgrowths arise. It commences in the wall of the bladder and spreads, not only in the substance of the vesical wall, but into the interior of the viscus by more or less exuberant papillary outgrowths. It is essentially a different type of growth from the one first described but, the terminology being somewhat similar, the two have been confused. The third type of carcinoma is nodular and of the scirrhus variety. It is of less frequent occurrence, does not throw out papillary processes, and should not be confused with either of the previous types, as it presents totally different naked-eye and cystoscopic appearances. Adeno-carcinomata and epitheliomata of the bladder occur but need not concern us here, because of their rarity.

Vesical growths tend to spread along the lymphatic channels in the wall of the bladder, often causing a much larger area of the vesical wall to be involved than might be expected from the naked-eye and cystoscopic examination of the site of the disease; the infiltration of the wall can be felt as a patch of induration.

The progress of these growths is, as a rule, comparatively slow, and for a long time the process tends to remain confined to the actual bladder. Penetration of the vesical wall and the involvement of neighbouring pelvic structures is therefore usually late, though cases are met with from time to time

in which the growth pierces the vesical wall at an early stage. Pelvic glands may be invaded, but not in the first stages of the illness, and metastases are generally fairly late, but increase in frequency with the duration of the disease.

In carcinoma of the prostate the symptoms are practically the same as those of benign hypertrophy and are due to obstruction to the outflow of urine from the bladder. Some degree of frequency of micturition occurs in nearly every case, more or less difficulty in passing water is common, and pain is significant. The importance of pain lies in the fact that whilst local pain is due to the presence of the growth and to the resulting obstruction, remote or referred pain may be due to pressure on pelvic nerves and to metastases. Hæmaturia is not a pronounced symptom in malignant prostate and would even seem to be less common than in cases of pure benign hypertrophy.

In the vesical growths hæmaturia is the all-important symptom, and is one which is a danger signal of the highest significance. Frequency of micturition is common, and is due to irritation of the bladder by the growth, cystitis, and the diminished capacity caused by the presence of the neoplasm in the vesical wall. Observation of a large number of cases, however, makes it clear that frequency is by no means an early symptom in every case, and may not appear until the disease is well established. Pain is variable, some cases suffer the most intense agony, with acute spasms and almost unendurable aching, whilst others apparently have but little discomfort. The pain is caused by the cystitis and the involvement of nerves in the wall of the bladder and in the cavity of the pelvis.

Thus in both carcinoma of the prostate and of the bladder early symptoms may be slight, evanescent, or entirely absent, the patient remaining undisturbed and unaware that any serious trouble hangs over him, and consequently missing the most favourable period for obtaining a cure. Unless

every middle-aged man is subjected to routine overhaul and to a cystoscopic examination, a considerable number of growths of the prostate and of the bladder must continue to escape observation until they have become well established. It therefore behooves every medical practitioner to seize the slightest sign or symptom, and not to relax his investigations until the cause has been accurately diagnosed and he is satisfied that its origin is innocent. Nearly every growth of the bladder bleeds at some period of its existence, often only slightly, but when it does it should be treated with all seriousness and never under any circumstances be left uninvestigated. It is only by attacking the really early cases that we can hope to obtain good results from our treatment.

On considering the diagnosis of these diseases we will discuss first the diagnosis of prostatic cancer. The paucity of early symptoms makes the trouble insidious at the beginning; so little occurs in many instances that the patient often fails to perceive that there is anything the matter with him. Whilst bleeding may occur, it is by no means characteristic, is often absent, and generally appears only at a late period of the illness. On the other hand, symptoms of obstruction to the outflow of urine are among the first to appear, are highly significant and should never be neglected, however slight. Any man over 50, who complains of such symptoms should be scrutinized with the closest care and, if possible, subjected to a thorough routine examination with a view to determining the exact condition of the prostate.

The actual diagnosis of malignant prostate is made by rectal palpation. This procedure may lead to either a negative, positive, or a doubtful result. Thus, it may be obvious that there is no cancer, or it may be clear that the case is malignant. Between these two extremes there are a considerable number of cases in which it is not too easy to determine if the condition is malignant or not. The size and shape of

the organ must be explored carefully, and particular care must be taken to note if there is any induration of the whole or part of the organ. Here experience is necessary, because an area of adenoma may suggest a nodule of induration and the suspicion of malignancy. The thickening due to carcinoma is due to fibrosis in and around the growth, is usually very hard, is irregular in distribution and, as we have seen, tends to spread in certain directions, i.e., into the intervesicular space and along the membranous urethra, so that any tendency to this distribution must be sought for carefully. Cases are met with occasionally in which the carcinoma remains soft, and which are therefore extremely difficult to diagnose before operation and section of the growth.

The growth of fibrous tissue which is responsible for the induration of the organ in a malignant case is also the cause of another important sign. As the inflammatory process around the neoplasm spreads it tends to infiltrate the surrounding regions, so that the pelvic fascial planes become thickened and indurated, with consequent fixation of the prostate to the adjacent parts. Care must be taken, therefore, to seek for any extension of the induration into the pelvic fascial planes and to note any limitation of the normal mobility of the gland.

As a rule cystoscopy does not give much help in the diagnosis between innocence and malignancy in an early case, owing to the rare and late involvement of the interior of the bladder by the malignant process in the prostate. The appearances seen are usually those due to obstruction and are the same as those in ordinary prostatic hypertrophy. Roughening, œdema and swelling over the anterior part of the trigone, where it overlies the prostate, if observed, must be regarded as suspicious. There is, however, one sign which may occur during cystoscopic examination and which is of value as suggesting malignancy. We have seen that the growth may spread into the fascial

planes and along the membranous urethra. This tends to fix the canal, so that when a cystoscope, or other rigid instrument, is passed it will be found to be much less freely movable than is usually the case in innocent prostatic enlargement.

Finally, it should never be taken for granted that a prostate is absolutely innocent until it has been removed and submitted to microscopical investigation. Sometimes, during an operation on a prostate, which is quite legitimately thought to be innocent, we encounter areas of induration and abnormal adherence of the gland to the interior of the capsule. When such cases are examined microscopically it is found that a few show malignant changes in the regions of induration and adherence.

When we come to consider the question of malignant growths of the bladder, we are faced with a somewhat different problem. Here we can see the actual appearances by means of the cystoscope. Also growths of the bladder have a special danger signal which they nearly all show sooner or later, i.e. bleeding. On this account it is essential that no bleeding from the urinary passages, however slight, should ever be neglected, or treated medicinally, until the interior of the bladder has been explored by the cystoscope and the site of the hæmorrhage determined. Unfortunately, it is not every growth which bleeds early; sometimes they give no signs until well advanced, and in such cases no early diagnosis can be expected and no one is to blame for the case being beyond radical treatment when symptoms arise.

The cystoscopic appearances of a malignant growth in the bladder are varied, and space will not allow a minute description of them. Briefly, the malignant papilloma may show no cystoscopic appearances which are definitely cancerous, and in such cases the final diagnosis will often be determined by discovering that the growth is resistant, or even flourishes, on attempting to destroy it by means of the diathermic cautery. Any departure from normal in a papilloma of the

bladder must be regarded as suspicious; any tendency to a greater solidity with close packing, or stunting, of the papillæ, or a swollen appearance, is suggestive. Sessile growths are more frequently malignant than those with freely waving pedicles. Very large or multiple growths also demand close scrutiny: they have probably been present in the bladder for a considerable time, and consequently are more liable to show malignant changes.

Papillary carcinomata and malignant papillomata, in which the neoplasm has spread into the layers of the vesical wall in addition to the above cystoscopic appearances, may also exhibit signs which are due to thickening of the mucosa and to interference with the lymphatic system of the bladder wall. The infiltration of the vesical wall causes a lessening of the mobility of the growth when manipulated with endovesical instruments through an operating cystoscope; the lymphatic involvement causes a greater or less extent of the mucous membrane surrounding the site of growth to become thickened and œdematous. Such areas are liable to be attacked by microbic infection and intense cystitis may occur, and degenerative changes in the growth may cause a surface necrosis on which phosphates and muco-pus tend to be deposited.

If the diagnosis remains doubtful after having considered the above points, it is sometimes permissible to remove a portion of the growth for microscopical examination by means of cystoscopic forceps. Objections to this procedure have been raised on the ground that it is liable to cause dissemination of the neoplasm. Such, however, is not the case provided that the spot from which the portion is removed is immediately subjected to cauterization by the diathermic electrode.

(To be continued.)

In Memoriam.

HERBERT WILLIAM CARSON,
F.R.C.S.

October 9, 1870—August 31, 1930.

THE following account of the professional life and work of Herbert Carson is written for the *Post-Graduate Medical Journal* in response to an editorial wish for some memorial by one of Carson's oldest fellow-workers and friends. If what is written should seem to some to be lacking in judicial detachment, it may be remembered that our friend left us only one short month ago.

Carson's strictly professional career was quite simple. After leaving St. Bartholomew's Hospital, where he was trained, and without holding any resident appointment there, he became, shortly after qualifying in 1896, House Surgeon in the most northerly of the London general hospitals—that at Tottenham.

He was made Assistant Surgeon in 1897 and Surgeon-in-Charge of the Ear, Nose and Throat Department in 1899, having in the meantime taken the F.R.C.S., and having worked as Clinical Assistant both at St. Bartholomew's Hospital, under Sir Anthony Bowlby, and at the Golden Square Throat Hospital; he was made full Surgeon in 1904, and at the time of his death had been Senior Surgeon for several years. He resigned charge of the Throat Department at Tottenham after twelve years' service, and then became avowedly a general surgeon, although, as time went on, he became especially interested in abdominal surgery.

His literary output in surgery was not copious, but it was certainly not without distinction. It included a small work on Surgical Diagnosis; the editing of a two-volume system, entitled "Modern Operative Surgery," which, appearing in 1924, contained important contributions by himself on abdominal surgery; the editing of the tenth edition of Pye's "Surgical Handicraft," which similarly contained sections