*Results obtained from Investigation of
After-Histories*

In all but 6 of the 100 cases a diagnosis was made of mitral disease or mitral stenosis. In 57, the larger group, mitral disease with a mitral systolic murmur was diagnosed. As shown in the table, 17, or 29 per cent.,

	Total	Dead	Living	Duration	Untraced	Remarks
Mitral disease, mitral systolic murmur	57	17 (29%)	35 (61%)	7 yrs.	3	2 living after 6 years
Mitral stenosis	23	15 (65%)	6 (26%)	8 yrs.		1 living after 7 years 1 living after 4 years
Aortic regurgitation and mitral stenosis	14	6 (43%)	6 (43%)	8 yrs.	2	
Aortic regurgitation, no valve disease, congenital	6					
	130	38	47		5	

were dead, and 35, or 61 per cent., were alive at the end of seven years, 2 were alive after six years, and 3 could not be traced. In a smaller group of 23 there were definite signs of mitral stenosis; 15 of these, or 65 per cent., were dead, and 6, or 26 per cent., were living after eight years, 1 was alive at the end of seven years, and another after four years. In the smallest group there were 14 with mitral stenosis and aortic regurgitation; 6 of these were dead and 6 living, or 43 per cent., after eight years; 2 could not be traced. No after-histories were obtained in the remaining 6 cases.

Mortality from Mitral Disease and Mitral Stenosis

The mortality rate, as one would expect it to be, is considerably higher in the mitral stenosis group, with 65 per cent. in one, and 43 per cent. in the other, or 57 per cent. if the two groups are combined, than in the mitral disease group with a mitral systolic murmur, and a death rate of 29 per cent. It is well known that a mitral systolic murmur is an unreliable sign of mitral disease. It is a more certain sign in children who have had rheumatism, as was the case in these patients. In this mitral systolic group the murmur may have been functional in some; the mitral valve may not have been damaged, and the heart not affected by the rheumatic infection. In a few, because of the loudness of the murmur, the short diastolic murmur of early mitral stenosis may have been missed. I do not think these problematic diagnostic errors materially alter the significance of these figures in this group of 57 cases.

There were undoubted signs of mitral stenosis in the remaining 37 cases. There is the possibility of an error in the diagnosis of aortic regurgitation in patients with mitral stenosis. In the 14 cases diagnosed aortic regurgitation and mitral stenosis, the death rate was lower than in the group of 23 with mitral stenosis alone. We might have expected a larger number of deaths in these cases, but the total is too small to stress this point.

Conclusions

In comparing the figures of the two main groups—57 with a mitral systolic murmur, and 37 with mitral stenosis—it has to be noted that the after-histories are for seven years in one and eight years in the other. It is probable that the death rate would have been higher than 29 per cent. at the end of eight years in the mitral systolic group, and lower than 65 per cent. at the end of seven years in the mitral stenosis group. Nevertheless, these

figures have an absolute and relative value that the variable factors which have been considered cannot alter. They allow the statement to be made that the prognosis in children with mitral stenosis over a period of eight years who have had treatment in a special convalescent home is a grave one. They raise the question of the value of this form of treatment in mitral stenosis, and whether it is worth while treating such cases in a special convalescent home.

The figures in the mitral systolic group confirm what is well known, that the prognosis is much more favourable in mitral disease in children before the signs of mitral stenosis have developed. They suggest that in early cases treatment in a special convalescent home may play a not unimportant part in controlling the course of the disease.

It has to be admitted that the treatment of a chronic disease like rheumatism, with the cause unknown, is unsatisfactory. This is particularly true in the treatment of children who belong to the poorer classes. On leaving the convalescent home, where they have been more or less protected against reinfection, they return to unhealthy homes, and are again exposed to rheumatic and other infections which cause more damage to the heart muscle and valves. The children of well-to-do parents are better protected against the ravages of rheumatism, for they have home surroundings in which they can live, grow up, and be educated under conditions which are comparable with those which exist in a special convalescent home. The prognosis is more favourable in these children, because the disease is likely to be recognized in its early stages and suitable treatment given at a time when it is possible to prevent the development of progressive changes leading to a serious cardiac disability.

The mortality rate in mitral disease occurring in children from the elementary schools, I am convinced, can be lowered if they are given treatment in a special convalescent home before signs of mitral stenosis have developed. This treatment should be continued over a longer period than has been possible hitherto from lack of bed accommodation. If treatment were limited to those patients with early signs of disease, more beds would be available and courses could be prolonged.

THE PROSTATE IN GENERAL PRACTICE*

BY

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The prostate is an organ which is of far greater importance to the clinician than to the anatomist or the physiologist. To the anatomist it is merely a glandular structure, fitting round the neck of the bladder, and no bigger than a chestnut; to the physiologist it is an accessory sex gland, whose function is so unimportant and so obscure that it has not yet been discovered. To the clinician, however, the prostate is particularly liable to disease, which may occasion disturbances of general health utterly out of proportion to the part the organ plays in the economy of the body. This difference between the roles of the prostate in disease and in health is entirely due to its position at the "cross-roads" of the urinary and genital systems, which are almost bound to suffer when the gland is diseased. For this reason it may be of interest to survey, from the standpoint of the general practitioner, some of the disturbances in general health that may result from a lesion of the prostate.

* Based on a paper read before the St. Pancras Division of the British Medical Association.

TYPES OF DISEASE

It will be convenient for the purpose of this paper to consider prostatic diseases under five headings: (1) inflammatory lesions of the prostate; (2) prostatic enlargement; (3) malignant disease; (4) neuroses; (5) other conditions.

Inflammatory Lesions

A prostatitis may be acute or chronic. If it is acute the symptoms are usually so striking that no doubt is left as to the nature of the disease. Chronic prostatitis, however, may present itself to the practitioner in many guises, and consequently errors in diagnosis are common, even when the patient complains of symptoms (since they are both urinary and genital in character) that should point clearly to the fact that the disease is located at the cross-roads. Most commonly there is frequency and pain on micturition, and deep-seated discomfort in the perineum after sexual excitement. Some patients will come on account of pain felt elsewhere in the genital tract—at the end of the penis, over the sacrum, in the groin, or in either testicle. They may also state that recently, and as far as they can see without reason, their testicles have become swollen. They may even recall that they were plagued with a similar visitation some months or years previously. Possibly they may have noted from time to time a tiny drop of urethral discharge at the meatus, or some inexplicable threads in the urine. Often these helpful observations are lacking.

There are certain points worthy of attention in connexion with chronic inflammation of the prostate. The first is that frequency and pain, a combination we are generally taught to associate with a lesion of the bladder, are just as likely to be the result of a lesion of the prostate. The second is that an absence of history of gonorrhoea does not exclude the possibility of a prostatitis. We are apt to assume that the genital tract is the privileged hunting ground of the gonococcus, and that other organisms find difficulty in establishing a footing in these regions. This is an absurd assumption. The prostate is a favourable field of action for any lucky microbial invader, and once organisms entrench themselves in the labyrinthine passages of the gland they are dislodged only with the greatest difficulty. If a patient complains of symptoms that may be due to a chronic infection of his prostate we must not be put off because he is above gonococcal suspicion. A rectal examination should be insisted upon; the prostate and vesicles should be carefully palpated, and if possible some secretion expressed for microscopical investigation. A chronic focus in the prostate may also give rise to signs and symptoms that seem entirely remote from any lesion of the genital tract. The patient may complain merely of vague pains over the lumbo-sacral region, or he may appear in the consulting room as a case of "sciatica" or of "chronic rheumatism." Sometimes the case is still more carefully disguised as one of recurrent iritis. Next to the teeth, the prostate is most commonly the primary focus of infection in cases of chronic fibrositis or synovitis. Droitwich and Harrogate, and other famous watering-places at which rheumatic patients congregate, are full of cases of undetected prostatitis.

Prostatic Enlargement

I need not enlarge upon the obvious cases of prostatic enlargement. An elderly man who complains of increasing difficulty of micturition and of nights disturbed by the necessity of rising is not likely to leave the consulting room without a diagnosis of his case. But sometimes a patient whose troubles are the result of prostatic obstruction consults his doctor about the subject of his general health rather than of micturition troubles. Indeed, I

have known a patient whose bladder was half-way to his umbilicus announce on arrival that he had come on account of nausea and vomiting. Only after examination and careful interrogation did it transpire that the gastric symptoms were preceded by a long history of micturition trouble, and that the vomiting was actually symptomatic of commencing uraemia. Such cases are by no means rare. To many men, a certain amount of frequency and difficulty is inevitable in old age. "My bladder has been weak for some years, but of course one has to put up with that sort of inconvenience when one gets on in years," is a familiar statement reflecting a common attitude of mind. Consequently, but little is said of the weakness, and attention is concentrated on other and more serious inconveniences. Even the doctor may be hoodwinked at times, and may be content with a general overhaul of the patient, followed by an examination of the urine and the finding of albuminuria. The dry mouth, anorexia, thirst, headache, nausea, and vomiting, taken in conjunction with the raised blood pressure and albuminuria, all fit in with a diagnosis of chronic nephritis, and the patient may leave the consulting room without the discovery being made that the renal trouble is secondary to a long-standing prostatic obstruction.

In other cases I have known the gastro-intestinal symptoms not uncommonly associated with prostatic enlargement to divert attention to the alimentary canal. A close connexion exists between the reflexes of micturition and defaecation, so that a man with a distended bladder may find it difficult or impossible to empty his rectum naturally; conversely, one with a loaded rectum may have similar trouble with his bladder. When the amount of residual urine in the bladder begins to increase, the action of the bowel is generally hampered, so that the patient, in addition to his urinary difficulty, complains of constipation, abdominal pain, and flatulence. To the Anglo-Saxon an interference with the daily evacuation of the bowels is of far greater moment than a weakness of his bladder, and it is this new development which often induces him to seek medical advice. Unless, therefore, the practitioner is thorough in his examination, his attention may be concentrated on the alimentary disturbances that are only of secondary importance, and miss the primary focus.

Malignant Disease of the Prostate

Carcinoma of the prostate is another example of a "silent" lesion. Not infrequently the chief disturbance of health to which it gives rise is general rather than local, so that the physician's attention is mainly directed to the debility and loss of weight. In other cases, the patient with a malignant prostate may appear in the consulting room complaining of intractable sciatica, or of constant pain in the lumbo-sacral region. The urinary symptoms may be comparatively slight, and the patient may not think it necessary to inform his doctor that his urinary stream has been getting progressively worse. One of the surprising features of the disease may be the smallness of the primary malignant focus as compared with the extensive secondary infiltrations of the sacrum and ilium. Palpation may discover only a slight hardening of one of the lobes, and yet a skiagram may reveal the fact that the pelvis is entirely eroded with growth. Recently I examined under an anaesthetic a patient who had consulted many doctors for pain in the lumbo-sacral region, with increasing debility. Had it not been for the favourable influence of the anaesthetic in facilitating the palpation of the prostate I doubt whether I should have detected a small hard nodule in one of the lobes. Yet a skiagram showed that his pelvis was the site of advanced secondary deposits. The x-ray appearances of the bones in these cases are very striking, and cannot be confused

with those of any other condition except Paget's disease. I would strongly advise any practitioner who suspects that his patient has a malignant prostate to lose no time in obtaining an *x*-ray of the pelvis. I can recall other cases in which even a careful rectal examination gave doubtful results, and yet the whole of the pelvic girdle was infiltrated with disease. Indeed, it may be said that whenever secondary bony deposits are discovered in an elderly man who has no obvious primary lesion, the prostate should be carefully investigated.

The Prostate as a Starting Point of a Sex Neurosis

Under this heading are included many cases of a rather obscure nature. There is no organ in the male body more frequently used as the peg on which to hang a neurosis than the prostate gland. This is undoubtedly due to the fact that the prostate has a large nerve supply, and that as an organ of sex its activity is linked up with the emotions. We have all been consulted by patients who complain of deep-seated pain in the neighbourhood of the prostate for which no cause can be discovered. Some of these patients have previously suffered from chronic gonorrhoea with prostatitis. Although by dint of conscientious treatment the prostatic focus may have cleared up, the pain is apt to remain. An additional symptom sometimes complained of is frequency of micturition, which is not continuous, but comes on in attacks which are likely to be associated with an increase of pain in the perineum, or at the end of the penis. Not uncommonly the sex act is rendered difficult for these patients by the existence of premature ejaculations or post-coital discomfort. The anxiety associated with the condition and the fear that it will lead to impotence is very likely to result in a general neurasthenia. I recollect the case of one patient who had prostatic massage for two years, and finally became so desperate that he attempted to commit suicide. On examining his prostate I could find nothing wrong with it, and a microscopical investigation of the expressed secretion showed a complete absence of pus cells. He was cured by reassurance, complete cessation of all treatment, and a holiday in Switzerland. It is possible that in some cases the symptoms are caused by a condition of congestion of the prostate, and in others to spasm of its muscle fibres. If a routine examination is made of prostates in the post-mortem room, it will be found that thrombosis in the prostatic plexus is of very frequent occurrence, and I am convinced that the pain complained of by some patients in whom no obvious disease exists, is due to circulatory disturbance associated occasionally with this vascular condition. For this type of case I have found gentle prostatic massage and diathermy applied through a rectal electrode of greatest use. Many cases have yielded to this treatment, especially when it is accompanied by assurance, suggestion, and attention to the general physical and mental health. Electricity is associated in all patients' minds with the idea of magic, and, used properly, it often has a magical effect.

Other Conditions

There are many other conditions of the prostate that might be included in this survey of prostatic lesions occurring in general practice. Among these must be mentioned tuberculosis and prostatic calculus. When dealing with chronic prostatitis I said that the patient might appear in the consulting room as a case of unexplained epididymitis. The symptoms of the prostatic disease may be so trifling that it is only when an extension occurs along the vas deferens in the direction of the testicle that the patient considers it necessary to consult a doctor. This holds good of a chronic prostatitis that is tuberculous in nature. Pathologists are still divided in their opinion whether genital tuberculosis is centrifugal

or centripetal in its spread. In other words, whether it starts in the prostate and extends to the epididymis, or vice versa. Personally, I hold strongly that genital tuberculosis travels in the same direction as other chronic infections of the genital tract, and that in the majority of cases a focus in the epididymis is secondary to one in the prostate or vesicle. One of my reasons for believing this is that in over 60 per cent. of cases both epididymes become involved through time. This fact should be an additional indication for a careful rectal examination in all cases of suspected genital tuberculosis.

The possibility that prostatic symptoms may be due to the existence of one or more small calculi within its substance is sometimes forgotten. The symptoms produced by a stone in the prostate may be similar to those caused by chronic infection or by malignant disease—namely, pain, frequency, and increasing difficulty in micturition. Rectal examination enables the prostatic calculus to be easily distinguished from chronic infection; in the former, an area of stony hardness and, where numerous stones exist, a characteristic grating can usually be detected. The differential diagnosis from a malignant focus is, however, in many cases difficult or even impossible without the help of an *x*-ray examination. Since an *x*-ray of the pelvis is desirable in all cases of malignant prostate, a skiagram will also serve as a means of distinguishing carcinoma from prostatic calculus.

CONCLUSIONS

It will be seen that to the clinician the prostate is an organ of paramount importance. It seems almost that Nature, having handicapped the female by providing her with reproductive organs liable to disease particularly after the menopause, has seen to it that the male should not be unduly favoured, and has provided him with a prostate. Another point brought out is that prostatic lesions may give rise to a wide range of symptoms, and to disturbances of the general health so marked that they throw the primary trouble into shadow. Finally, the moral has been drawn that if we are to avoid mistakes in diagnosis a careful rectal examination, followed, in cases of doubt, by a microscopical investigation of the expressed fluid, must form part of the routine examination of any male patient complaining of symptoms of an obscure nature.

TREATMENT OF PARANASAL SUPPURATION PERSISTING AFTER OPERATION*

BY

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I am not alone in my view that there has been a great deal of unnecessary and unwise surgical zeal devoted to the nasal accessory sinuses. Eugene Lewis says: "No great amount of clinical experience is required to realize that for some reason or other patients who have been subjected to extensive surgery of the upper respiratory tract are seldom better of their original ills." I commend his courage in demanding less spectacular surgery and more serious consideration of the underlying principles concerned with inflammatory manifestation of mucous membrane. My contribution is merely an effort to discuss the subject from my own practice and experience.

Persistence of discharge from any nasal accessory sinus following operation does not necessarily demand further

* Read in opening a discussion in the Section of Laryngology and Otolaryngology at the Annual Meeting of the British Medical Association, Winnipeg, 1930.