formed the subject of the investigation, the results of this operation compare very favourably with those obtained under conservative treatment alone. Forty-eight per cent. of the surgical cases were completely cured and 25 per cent. were greatly improved. The figures for the medical cases are 15 per cent. cured and 43 per cent. greatly improved.

The value of these results may be criticized, in that some of the cases are too recent for a complete cure to be claimed. The same doubt exists, however, in regard to both the medical and the surgical cases, and does not affect the pertinence of the comparison. Furthermore, while some of the more recent patients who now regard themselves as cured may possibly suffer relapse later, there are doubtless others, now classified as "improved," who will claim a complete cure at a later date.

No definite conclusions may be drawn from a comparison of the number of failures of medical and surgical treatment in this series. The "derelicts" appear to be about equally divided. The clause "unable for work," in Class D, doubtless drew to this class several patients whose unfitness was due to some outside cause. In five cases information to this effect was supplied by the patient.

In the small series of cases investigated where gastro-duodenostomy had been performed, the results of this operation could not be shown to equal those of gastro-enterostomy.

In 65 per cent. of the cases investigated post-operative treatment, in the form of restricted diet and alkaline medication, was abandoned within six months of the operation. While very little guidance is available as to what may be regarded as the necessary duration of such treatment, six months cannot be looked upon as an error on the side of safety. It seems reasonable to suggest that, if treatment had been continued over a more prolonged period, the number of unsatisfactory results recorded would have been considerably less.

I am indebted to Dr. Alexander Goodall of Edinburgh for his help and advice in the carrying out of the investigation.

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J. A. Burgess (*Urol. and Cut. Rev.*, December, 1934, p. 867) records his experience of evipan anaesthesia in twenty-five minor genital operations, such as cauterization of venereal warts, dilatation of stricture, urethroscopic cauterization of follicles, meatotomy, and incision of bubo. The drug is injected intravenously at the rate of about 1 c.cm. in 15 seconds. When 2 to 3 c.cm. have been injected the patient becomes unconscious and the operation can be commenced at once. In a healthy adult 3 c.cm. produce anaesthesia for about five minutes. The patient must rest fifteen minutes after regaining consciousness, and may then go home. The ease of administration, the rapidity and pleasantness of induction, and the freedom from after-effects render evipan a useful drug to the venereologist.

ENDOSCOPIC RESECTION OF THE PROSTATE

A CRITICAL SURVEY OF 150 CASES

BY

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AND

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This report is based on an investigation of 156 consecutive cases of bladder-neck obstruction treated by endoscopic resection at All Saints' Hospital for Genito-urinary Diseases, London. In this inquiry we have determined the mortality rate of the operation and the complications that occurred, and have attempted to assess its efficiency as regards (1) *Relief of symptoms*, (2) *Anatomical results*, (3) *Permanence*, by re-examination of those patients surviving the operation for more than one year.

We have carried out a personal inquiry as regards their symptoms and general health, and have submitted them to a cystoscopic and urethroscopic examination wherever possible in order to observe the anatomical results and compare them with the symptomatic improvement. We have excluded from the late results of the series all those in which the operation has been performed less than one year before our examination.

There remain 120 cases with a post-operative period of over that duration. In this group all types of bladder-neck obstruction were treated, irrespective of the general condition, and thus the uses and limitations of the method were determined from the results in many greatly differing local and general conditions. This paper describes the dangers of the operation and the complications which occurred before the present comparatively safe technique was developed by experience gained in the early cases. We have included all patients from the first operated upon in October, 1931.

Technique

In all cases the instrument used was the McCarthy resectoscope or the Ryall-Millin modification of it. In the earlier operations the current was supplied through the "complex oscillator radiovalve" unit, but while the cutting was excellent the coagulation was poor. During the last two and a half years the current has been supplied through a spark-gap type of generator. The result aimed at is the production of a "gutter" by the removal of the posterior commissure, middle lobe, or bar flush with the trigone of the bladder, and by undercutting the lateral lobes when present. This canalizes the supramontine prostatic urethra. It is left with a shelving floor from the trigone to the prostatic urethra. The retroprostatic pouch is eliminated. No attempt has been made to remove the greater part of the lateral lobes within the capsule, as appears to be the practice of certain American urologists. A 24 F.G.E. catheter is tied for three or four days to drain the bladder after the operation. When the catheter is removed the patient micturates normally. Daily catheterization is necessary to remove residual urine when present, and for bladder lavage in the presence of sepsis.

Although the usual time for the indwelling catheter is three days, this varies somewhat according to the type of obstruction and the progress of the case. Thus, where only a small amount of tissue has been removed, as in fibrous prostates, small median lobes, or post-prostatectomy bars, twenty-four hours is ample. In more extensive resections after removal of the catheter the patient may be unable to micturate because of bladder-neck oedema.

This necessitates reinsertion of the catheter for a further three or four days to allow the oedema to subside. Recently in the case of large vascular prostates it has been our practice to institute continuous bladder lavage through a two-way catheter, using sterile water or 3.8 per cent. citrate solution to avoid clot retention. This is unnecessary if scrupulous care is taken to arrest all bleeding points with the coagulating current at the time of operation.

Anaesthesia

The anaesthetics used in this series were:

(a) General inhalation (gas and oxygen) ...	30 cases
(b) Spinal	98 "
(c) Caudal block	28 "

Notwithstanding the grave general condition of many of the patients, no deaths were directly attributable to the anaesthesia. We have observed some unpleasant sequelae following the use of spinal anaesthesia, amongst which were permanent spasticity of lower limbs (one case); atypical girdle and shooting limb-pains (two cases); and a concomitant fall in blood pressure which masked potential bleeding. In consequence we are averse to its routine use. General anaesthesia (gas and oxygen) is better than spinal, but in uraemic patients with poor circulation or chronic bronchitis its use is contra-indicated. The present anaesthesia of choice is that of caudal block. It usually gives a sufficient degree of anaesthesia, and, if necessary, may be supplemented with gas and oxygen. The technique is to insert a spinal needle through the sacral hiatus. After ascertaining that the point is not in the subarachnoid space, about 30 c.cm. of 2 per cent. novocain is injected. At least fifteen minutes must elapse before commencement of the operation.

Clinical Data

In addition to renal function tests these patients all had pre-operative cystoscopic and posterior urethroscopic examination. The following figures give some indication of the ages of the patients. The blood urea figures are of some interest.

1.—Age at Operation (156 Patients).

80-90 years	4 cases	3%
70-80 "	60 "	38%
60-70 "	61 "	39%
50-60 "	27 "	17%
Below age of 50 years ...	4 "	3%

2.—Blood Urea Immediately before Operation.

Below 50 mg. per 100 c.cm. ...	65 cases	41%
50-70 per 100 c.cm.	64 "	41%
70-90 per 100 c.cm.	16 "	10%
Above 100 mg. per 100 c.cm. ...	11 "	8%

This shows that 59 per cent. may be regarded as poor risks for suprapubic prostatectomy.

3A.—General Complications.

Diabetes	1
Gross myocarditis and decompensated valvular lesions	4
Marked arteriosclerosis	4

The majority of the patients had some degree of arteriosclerosis.

3B.—Local Complications.

Gross urosepsis	8
Calculi	7
Papilloma of bladder	1
Carcinoma of bladder	1
Cases condemned to permanent suprapubic drainage elsewhere	4

All patients treated were men complaining of quite definite symptoms referable to prostatic enlargement. Thus in 100 cases measurement of residual urine was:

Residual urine less than 2 oz.	15%
Residual urine of more than 2 oz.	31%*
Chronic retention to umbilicus	29%
Suprapubic cystostomy	6%
Unstated cases	19%

* Average 5 oz.

4.—Pre-operative Measures.

All patients had forced diuresis on admission by increasing the intake of fluids. Where residual urine was more than 5 oz. the bladder was drained continuously by indwelling catheter. Preliminary decompression was employed when necessary. In the earlier cases suprapubic cystostomy was performed in uraemic patients or in presence of infection. In the later series it was performed less frequently, and in the whole group was done only ten times. The type of bladder-neck obstruction was diagnosed by general examination, cystoscopy, and posterior urethroscopy. The following classification was adopted:

Generalized prostatic enlargement ...	65 cases	54%
Middle lobe type	28 "	23%
Fibrous prostate (median bar or sclerotic bladder neck)	11 "	9%
Early prostatic enlargement, mostly posterior commissural hypertrophy ...	3 "	2.5%
Post-prostatectomy bar due to fibrosis	4 "	3%
Malignant prostate	9 "	7.5%

120

In our opinion all patients suffering from any form of bladder-neck obstruction, in addition to a routine general examination should be subjected to cystoscopy and urethroscopy. This not only gives essential information about the obstructing factor, but also about the condition of the bladder—for example, diverticula, cystitis, calculus, growths, etc.

Results: Immediate Mortality

In 156 endoscopic resections eighteen deaths occurred, a mortality rate of 11 per cent. The table opposite gives the important facts.

A review of the causes of death thus gives the following findings for the eighteen cases.

Clot retention	6
Uraemia	3
Pyelonephritis	2
Extraperitoneal rupture of the bladder ...	2
Pneumonia	2
Pulmonary embolus	1
Coronary thrombosis	1
Cerebral haemorrhage	1

Of the above deaths 13, or 80 per cent. of the total mortality, are directly attributable to the operation; the others are common to any operation, but cannot be excluded from the general mortality rate. Of the thirteen deaths directly due to the operation, clot retention accounts for six. It is discussed in full below, but as a cause of death can be eliminated in the future.

To take some of the specific causes of special interest:

Uraemia accounts for three deaths. Two of these patients were in bad general condition, and the third, although having good renal function tests, was 84 years of age. Uraemia is liable to occur after any operation on the genito-urinary tract, and is a definite risk of the operation, but judging from the number of gravely ill patients who have survived without its development, the risk is minimal. In some respects the results of operation are most gratifying. Some of the patients operated on were "human derelicts" given a new lease of life.

Infective pyelonephritis caused two deaths. Both patients were in a poor general condition and had heavily infected bladders. Judging from these fatal cases and the

high morbidity rate in patients with gross infection of the bladder, we are of the opinion that marked cystitis is a contraindication to immediate resection. It should be treated by prolonged drainage either by catheter or by suprapubic cystostomy as a preliminary measure.

Extraperitoneal Rupture of the Bladder.—In both cases this was due to errors of technique in the hands of those with wide experience of posterior urethroscopy. It is interesting, incidentally, to see how the death rate diminishes with experience. Thus:

First 50 cases	...	...	...	10 deaths
Second 50 cases	...	...	...	5 "
Third 50 cases	...	...	...	3 "

Complications of the Operation

These are best considered in tabular form, as under:

Early:

(a) Excessive haemorrhage, with or without clot retention	...	...	...	21 cases
(b) Uraemia	...	...	...	5 "
(c) Infective pyelonephritis	...	...	...	3 "
(d) Perforation of the bladder and extravasation	...	...	...	3 "
(e) Gangrenous cystitis	...	...	...	1 case

Late:

(a) Epididymo-orchitis	...	...	...	15 cases
(b) Incontinence of urine	...	...	...	1 case
(c) Stricture	...	...	...	8 cases

EXCESSIVE HAEMORRHAGE

There were twenty-one cases. Seven of the patients developed clot retention, and six of these died. Excessive haemorrhage *per se* is not a serious condition (the blood loss is small compared with that of suprapubic enucleation), and can be controlled with hot lavage; but the clotting of the blood introduces a formidable and dangerous complication—that is, retention.

Factors in the Production of Excessive Haemorrhage.

(a) Type of prostate. The gross, generally enlarged prostate, especially where chronic retention has necessitated prolonged catheter drainage, is liable to bleed. (b) Technique. Too rapid cutting with the loop and insufficient care in securing all bleeding points with coagulating current. (c) Anaesthesia. Spinal anaesthetic, by lowering blood pressure during operation, increases the tendency to reactionary haemorrhage from cut vessels, which remain unrecognized during the operation.

Age	General Condition	Blood Urea in mg. per cent.	Urea Concentration Test per cent.	Type of Prostate	Special Pre-operative Treatment	Anaesthetic	Post-operative Measures and Cause of Death	Day of Death
76	Poor. Chronic retention, with overflow	50	1.6 1.9 1.6	Colossal prostate bulging into rectum	Indwelling catheter	Spinal	Clot retention. Lavage	2nd
78	Good	47	2.4 3.0 2.8	General enlargement		Spinal	Cystitis; secondary haemorrhage with clot retention 15th day. Suprapubic cystostomy 16th day	19th
72	Poor. Chronic retention, with overflow	108	1.0 1.0 1.1	Middle lobe enlargement	Indwelling catheter	Spinal	Clot retention. Refused suprapubic cystostomy	2nd
79	Poor. (Previous cystostomy)	68	0.9 1.2 1.4	Middle lobe enlargement		General	Clot retention	2nd
66	Poor			Middle lobe enlargement		General	Clot retention. Lavage	5th
59	Good	30	1.6 2.0 2.9	Post-prostatectomy bar			Clot retention. Extravesical abscess. Extravasation. Suprapubic cystostomy	8th week
84	Good. R. U. 4 oz.	54	1.7 2.2 2.3	Large general enlargement		Spinal	Uraemia	2nd
78	Poor. Chronic retention and overflow	68	0.9 1.2 1.4	General enlargement	Decompressed; then suprapubic cystostomy	Spinal	Uraemia	2nd
72	Poor. Chronic retention and overflow			Malignant prostate		Spinal	Anuria	2nd
75	Poor. R. U. 4 oz.	68	1.0 1.0 1.3	Fibrous type	Indwelling catheter 1 week	General	Pyelonephritis and uraemia. Suprapubic cystostomy	24th
76	Poor. R. U. 6 oz.	54	1.1 1.9 2.0	General enlargement		Spinal	Pyelonephritis	6th
54	Poor. Chronic retention and overflow	74.6	2.4 2.8 3.0	General enlargement	Catheterized 1 week	Spinal	Extraperitoneal rupture of bladder	1st
54	Good	27	0.8 3.0 3.6	Fibrous bar		Caudal	Perforation of bladder; indwelling catheter	6th
71	Bad. Chronic retention, with overflow			Carcinoma	Decompressed. Indwelling catheter 2 weeks	Spinal	L. pneumonia	11th
69	Poor. Retention and overflow	49	0.5 0.6 0.8	General enlargement		General	Bronchopneumonia	11th
68	Poor. R. U. 5 oz.	70	1.8 2.0 2.0	General enlargement		Spinal	Pulmonary embolus	11th
82	Poor	101	0.8 0.9 1.3	General enlargement		Caudal	Coronary thrombosis	10th
74	Good	48	1.7 2.0 2.9	General enlargement		Spinal	Cerebral haemorrhage	14th

Clot Retention.—This does not imply mere blocking of the catheter by a clot, a condition which is not uncommon and is relieved by dislodging or aspirating the clot or changing the catheter. Clot retention is brought about when the free oozing of blood from the cut surface of the prostate clots in the bladder base, and forms an impenetrable bar to the passage of fluid. It is noticed that the indwelling catheter is not draining, the bladder becomes palpable to the attendant, and a change of catheter fails to withdraw urine. If the effects of the anaesthetic have "worn off" the patient experiences severe distension pain; he becomes profoundly shocked, and if unrelieved will collapse and die in twenty-four to thirty-six hours. Trained attendants are essential in the nursing of these patients. An absence for six hours by the surgeon may result in a fatality.

Factors Precipitating Clot Formation.—These are: (a) Lavage with silver nitrate solution in a vain attempt to control haemorrhage. (b) Use of unduly small bore catheter—21 F is the smallest to be used with safety. (c) Infection. In four cases clot retention followed secondary haemorrhage, which usually occurs in four to ten days in previously heavily infected bladders, especially when emptying incompletely after removal of the indwelling catheter. Incomplete emptying may be due to: (1) inadequate removal of tissue, (2) atony of the bladder, and (3) oedema at the bladder neck.

Prophylactic Treatment.—Excessive haemorrhage may be avoided by choice of case—that is, avoid operating on very large prostates or on grossly infected bladders; choice of anaesthetic; care in technique as regards coagulation of bleeding points and in the after-care of the patient. The bladder must empty completely after removal of the indwelling catheter. A watch should be kept for the warning of blood-stained voided urine. When this occurs hot wash-outs with sterile water at 120° F. usually suffice, or, if the former fails, reintroduction of the resectoscope and diathermy of bleeding points. As regards clot retention, its prophylaxis is haemostasis. In rare cases in which oozing is troublesome after all precautions have been taken, continuous two-way irrigation with 3.8 per cent. sodium citrate solution is instituted (Loughnane). If clot retention has been allowed to occur, and an attempt to remove clots with an evacuator and lavage has failed, it is advisable to perform suprapubic cystostomy as soon as possible. This permits the clots to be removed and the bladder to contract down and stop bleeding. Recurrent instrumentation, with superadded shock and danger of infection, is avoided. In addition, general measures, such as continuous intravenous saline or blood transfusion, when indicated, should not be delayed.

URAEMIA

This is especially liable to occur as an acute process in patients with renal damage. It makes its appearance as a decreased urinary output with progressive drowsiness. Preventive treatment consists in pre-operative forced diuresis, and an indwelling catheter for bladder drainage when necessary (residual urine over 3 oz.). Treatment of the established condition consists of continuous drip intravenous saline and glucose plus usual medical treatment (Wheeler).

PERFORATION OF THE BLADDER

Due to errors of technique; two patients died and one recovered. As soon as this condition is recognized immediate suprapubic cystostomy is the only course to adopt.

GANGRENOUS CYSTITIS AND EPIDIDYMO-ORCHITIS

Gangrenous cystitis occurred in one case, and resulted in extravasation of urine. Suprapubic cystostomy was performed, and the patient is now in excellent health. Epididymo-orchitis accounted for fifteen cases (12 per cent.). Most of these were mild, and subsided spontaneously. In two cases abscess formation occurred, and required incision. It is interesting to observe that in the majority of cases this condition occurred on the left side.

STRICTURE

In 120 patients this occurred in eight cases (7 per cent.). Three were at the triangular ligament and five were meatal. The factors in the production of stricture are instrumental and infective. The resectoscope sheath is of large size, 28 Charrière, and if introduced without gradual preliminary dilatation the resultant trauma will cause stricture formation. A narrow meatus should be subjected to meatotomy, and not split with the instrument. Again, excessive coagulation in the posterior urethra may be followed by stricture formation. Infection around the indwelling catheter is the probable cause in most cases occurring at the bulb, especially if an exacerbation of an old urethritis. The treatment of these strictures differs in no wise from that of an ordinary traumatic and inflammatory stricture, and their possible occurrence merely emphasizes the need of routine re-examination so as to treat the condition at an early stage.

Late Results

In compiling these results we have made a critical analysis of the first 123 operations, and in order to arrive at some conclusion as to the benefit derived have re-examined the patients personally as has already been described in the introduction. All these patients had undergone their operation more than one year ago; about half of them two years ago; and a small proportion three years ago.

We have divided the results into three groups, thus: Group 1 (good results), Group 2 (improved results), and Group 3 (poor results).

Group 1.—For a patient to be classed as a good result we demand the following. (a) There must be improvement in the general health. (b) There must be no difficulty in micturition, and the urinary stream must be good. (c) No pain, burning, or scalding must occur during the act. (d) Frequency must be restored to normal, with complete freedom from night voiding on more than one occasion. (e) The urine must be clear. (f) The residual urine must be no greater than 1 oz. (g) Cystoscopically there must be no cystitis, and urethroscopically a good shelving floor.

Group 2.—Into this class we have placed all those patients who have been greatly improved by the operation, but in whom all the above requirements have not been fulfilled.

Group 3.—In this group are those patients whose symptoms have not been alleviated.

The total number of cases in the series under review was 123, distributed as follows:

Group 1 (good results) ...	...	...	...	62
Group 2 (improved results) ...	...	...	...	19
Group 3 (poor results) ...	...	...	...	9
Died after operation ...	...	...	...	15
Died since ...	...	...	...	6
Untraced ...	...	...	...	12
Total ...	...	...	...	123

GROUP 3

Taking Group 3 first, the following table gives the necessary data.

Age	Type of Prostate	Complications	Remarks
79	General enlargement with cystitis	Marked cystitis	Patient had been self-catheterized for ten years. Improvement for two years, then became more heavily infected
61	General enlargement	Severe cystitis needing suprapubic cystostomy	Contracted bladder
62	General enlargement	Haemorrhage with infection	Still chronic cystitis
56	Very big prostate	Incontinence	Permanent incontinence
55	Very big prostate	—	Temporary improvement; had suprapubic prostatectomy later
65	Big malignant prostate	—	—
74	Big malignant prostate	—	—
76	General enlargement	Cystitis	Carcinoma developed later
52	Big malignant prostate	—	Had previous suprapubic, healed

These nine patients when examined were as bad or worse, or had required further operative intervention. The following facts are seen from the above table: (1) all cases had big prostates; (2) three were bad because of infection; (3) four cases were malignant; (4) one case had permanent incontinence; (5) one case required later prostatectomy, which proved successful.

GROUP 2

Among this group of otherwise good results twelve cases had a frequency of micturition of 2-4 at night (although this was less than before operation): cystoscopy revealed chronic cystitis. There were four cases of malignant prostate (two of whom had "permanent suprapubic drainage"): these were improved, and passing urine *per vias naturales*. Good results were obtained in three cases, but they had strictures, which are now being treated. Some difficulty in passing water, with a small stream, was experienced in two cases.

GROUP 1

These require no further description, as they fulfilled all the stipulated requirements. The sixty-two good results were made up of the following pre-operative types: middle lobe enlargement, nineteen cases; general enlargement, thirty cases; fibrous bladder neck, nine cases; early cases of general enlargement, three cases; and post-prostatectomy bar, one case. In all, the cases surviving the operation for more than one year and re-examined amounted to ninety. The table below summarizes the facts.

Type	No. of Cases	Good	Improved	Poor
General enlargement ...	50	30	14	6
Middle lobe	19	19	—	—
Fibrous	9	9	—	—
Early enlargement ...	3	3	—	—
Post-prostatectomy bar...	2	1	1	—
Malignant prostate ..	8	—	4	4

Conclusions

As the result of these investigations we are convinced that the cases giving the best results with the least liability to complications are the middle lobe enlargements and the fibrous bladder-neck contractions. Early general prostatic enlargement can be treated with safety by this method, and in future will be submitted to this

operation in greatly increasing numbers. Established generalized prostatic enlargement may be treated with success, but the possibility of complications is more likely than in the above. In patients with very large prostates the operation of choice is suprapubic prostatectomy, but if for any reason this is contraindicated, then endoscopic resection should be performed, if necessary in two or more stages, and this will relieve their symptoms and conserve normal micturition. We believe that permanent suprapubic cystostomy for non-malignant uncomplicated prostatic disorders is obsolete, and that even in malignant prostatic obstruction many cases can be considerably alleviated by this procedure.

In our examination of these patients the following interesting facts emerged: (1) In some of the cases the full benefits of the operation are not experienced until long after discharge from hospital, sometimes three months or more; cases leaving hospital, apparently poor cases, have, with the clearing up of cystitis, oedema of bladder neck, etc., become "Group 1" results. (2) In many of the cases examined, in spite of enormous lateral lobes, which by their apposition apparently convert the prostatic urethra into a vertical slit, the patients have been able to empty the bladder completely, though slowly, with a small urinary stream. This indicates that the removal of tissue in the region of the posterior commissure and the production of a shelving floor removes the factor of the prostatic enlargement responsible for retention obstruction. Undoubtedly the best results have been those cases with a good "gutter" made by undercutting the lateral lobes; these have no difficulty, a good-sized urinary stream, and plenty of force.

Summary

In this review we have satisfied ourselves that:

1. In a high proportion of cases of bladder-neck obstruction the symptoms can be completely relieved and the patient restored to normal by endoscopic resection.
2. Considerable experience by the operator in this field of surgery is required before he can undertake the procedure with any degree of safety.
3. The following points are of importance: (a) Choice of case. (b) Relation of anaesthesia to haemorrhage. (c) Danger of infected bladders. (d) Anatomically all that is required is the formation of a good "gutter." (e) Permanence. It is early to speak of permanence of results yet, but in those of more than two years' standing that we have examined there seemed no reason for supposing that they will require further operation.

We wish to acknowledge our gratitude to the honorary surgical staff of All Saints' Hospital for their encouragement in this research and for permission to utilize notes of their cases.

Further details have now been received of the programme for the celebration in May of the 150th anniversary of the Vienna General Hospitals, to which reference was made in these columns on December 22nd, 1934 (p. 1185). Substantial reductions in railway fares will be available in Austria, with extensions of time and also availability of tickets for excursions elsewhere in that country. A post-graduate class will be held from May 13th to 25th in internal medicine and related topics, with special reference to modern therapy. At the conclusion of the fortnight there will be a clinical course of the same duration in paediatrics, conducted by Professor Hamburger. Another course in gynaecology will continue from May 27th until June 3rd under Professor Weibel, while a third course in dermatology and venereal diseases will be held under Professor Kerl from May 27th to June 6th. Details can be obtained on application to the offices of the Vienna Medical Faculty, Alserstrasse 4, Vienna IX.