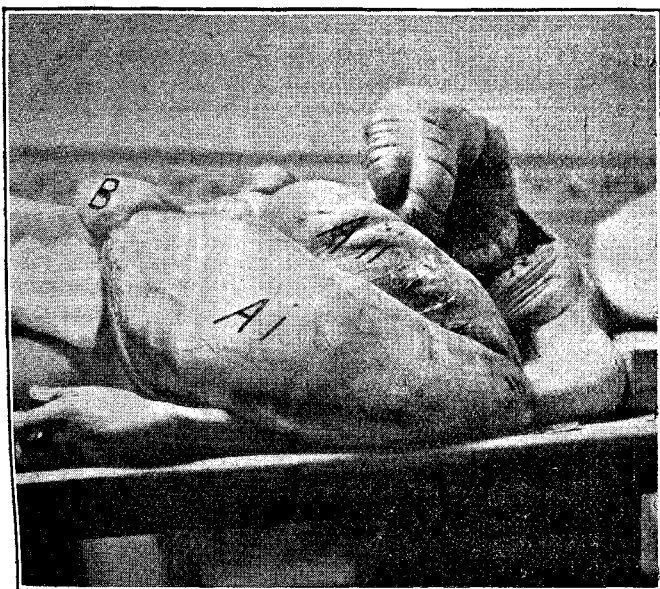


and the patient gradually sank and died at 9.40 A.M. on the 13th.

Necropsy.—The abdomen measured 52 inches at its greatest circumference, and on being incised the tissues began to tear owing to the internal pressure, showing that the muscular walls had not entirely accommodated themselves to the swelling, and that the condition was therefore to some extent acute. On opening the peritoneum a hollow viscus at once protruded and had to be punctured to prevent its bursting. The abdomen was then completely laid open and the front wall of the chest was removed. What appeared to be an enormous stomach was then seen, extending from the level of the third rib above down into the pelvis. The heart was not to be seen, and the lungs could just be detected at the sides; the diaphragm was completely displaced. The viscus mentioned proved to be an immensely dilated sigmoid flexure and rectum, terminating on the one hand (A ii) in the lower end of the descending colon, and on the other (A i) at the anus. The length of this loop of intestine was 45 inches and its greatest circumference 23 inches. On laying it open it was found to contain nearly $3\frac{1}{2}$ gallons of faeces of a clay-like consistence and dark brown colour. The walls of the sac were very thick and the vessels exceedingly large, as may be seen from the illustration. The rest of the large bowe



Reproduction of a photograph showing immensely distended sigmoid flexure and rectum.

was somewhat distended with gas and measured at its greatest circumference 17 inches, but beyond this increase in size it was normal. The small intestine and stomach appeared to be normal. The bladder was entirely covered by peritoneum and was pedunculated, as appears in the illustration in the right groin at B. The chief point with regard to the other organs was the small size of the lungs—13 oz. each—and these were compressed into a small space at the apex of each side of the thoracic cavity. The skull measured 26 inches in the occipito-frontal diameter; the fontanelles were closed, but the bone was everywhere thin. The ventricles of the brain contained over a pint of clear fluid.

This case well illustrates how greatly the wall of the large bowel may be stretched and its lumen increased in chronic constipation, and to what extent the abdominal parietes will accommodate themselves to the altered conditions. That such a condition could arise without the greatest distress and pain can only be accounted for by the fact that the patient was an imbecile.

PRESENTATION TO A MEDICAL PRACTITIONER.—

At the town-hall, Ottery St. Mary (Devon), on August 21st, Sir John Kennaway, on behalf of a large number of subscribers, presented Mr. Felix P. Bartlett, L.R.C.P. Lond., M.R.C.S. Eng., D.P.H. Lond., with a silver salver as a mark of respect and esteem on the occasion of his leaving Ottery St. Mary for Australia. Mrs. Bartlett received a rose-bowl.

THE OPERATIVE TREATMENT OF RETROVERSION AND PROLAPSE OF THE UTERUS.

By ALBERT E. MORISON, F.R.C.S. EDIN.,

SENIOR SURGEON, HARTLEPOOLS HOSPITAL; SENIOR ASSISTANT SURGEON, SUNDERLAND INFIRMARY.

PROLAPSE of the uterus occurs from the following causes: (1) Tearing or stretching of the posterior segment of the pelvic floor, which consists chiefly of the levator ani and the deep pelvic fascia; (2) increased intra-abdominal tension and alteration in the line of projection of the intra-abdominal pressure; and (3) stretching of the parts forming the anterior segment of the pelvic floor. In the early stages of prolapse one or all of these causes may be at work, in the later processes all are involved.

A short description of the normal conditions of the pelvic cavity will help in understanding this. In the natural condition of the pelvic cavity the uterus in the erect position of the body, and with the bladder entirely or almost empty, lies somewhat anteflexed upon the bladder, and when pressure is put upon the uterus by any increase of intra-abdominal tension the direction in which it is exerted is at a right angle forwards and downwards and tends to still further antevert the uterus. When the bladder is full the uterus is pushed backwards, and any increase in the intra-abdominal pressure tends to aggravate the condition. In this position a stretching of the anterior pelvic segment takes place, and the backward pressure may become such that a permanent retroversion or retroflexion is produced. These two factors of themselves will, however, not cause prolapse unless the third factor be weakened or destroyed—viz., the posterior segment of the pelvic floor. This, as we have seen, consists of the levator ani and the fascial planes constituting the perineal body. Under increased intra-abdominal pressure this body contracts to oppose the effect of the contraction of the abdominal muscles and closes the outlets of the pelvis, the rectum, and vagina during this period of strain. When the perineal body is torn or stretched not only does this counteracting force disappear, but the angle at which the force from above is directed is changed. Instead of being downwards and forwards, it now becomes downwards and partially backwards. When the force acts in this manner on a relaxed posterior segment, and especially on an enlarged and flabby uterus such as is present after parturition, first retroversion, then complete descent of the pelvic contents, takes place.

The sequence of events is, then, as follows:—A torn perineum with stretching of the utero-sacral ligaments and vesico-vaginal septum, together with a large, flabby, sub-involuted uterus, allows any increased intra-abdominal strain, such as lifting, &c., to produce a prolapse more or less complete.

Any operation, therefore, undertaken to cure this condition must aim at three things: (1) Restoration of the perineal body; (2) replacement of the uterus to its normal position, so that the intra-abdominal pressure is again exerted in the normal direction—viz., downwards and forwards; and (3) improvement of the condition of the anterior uterine segment.

As many of these cases of procidentia occur in women who have not passed the menopause, a further important desideratum is that the possibility of conception shall not be interfered with, and in the event of pregnancy that the patient shall not incur any special risks during parturition. All operations which have as their result the fixing of the uterus to the anterior abdominal wall are to be condemned. Not only may this suspension interfere with the natural course of pregnancy, but post-partum hæmorrhage is said commonly to follow labour when the uterus is thus fixed. Moreover, the adhesions formed are apt to stretch and to produce a band between the uterus and the anterior abdominal wall which may be a source of danger as the incarceration of a loop of intestine under it can occur.

The operation I am about to describe obviates, I think, all these disadvantages, and is easy to perform. The time occupied in the whole operation need not exceed half an hour and no special instruments are required. Since my first operation in June, 1909, I have operated on 25 cases varying in age from 20 to 73 years, and all have

been successful both as to the operative result and subsequently. The preparation of the patient for the operation is similar to that for any pelvic operation by the combined abdominal and perineal route. The patient stays in bed for at least two days before the operation. Her vagina is douched twice a day with 1 in 2000 sublimate lotion; a dose (℥i.) of castor oil is given two nights before the operation; on the evening preceding the day of operation a hot bath; and on the operation morning a simple enema is administered. Two hours before the time fixed for operation the abdomen and vulva are shaved dry and painted with tincture of iodine (B.P.) and the parts are covered with a sterile towel. The patient is first nearly anæsthetised with chloroform, and ether by the open method is given during the remainder of the operation. The patient is placed in the lithotomy position for perineorrhaphy and the abdomen, vulva, and vagina are again painted with tincture of iodine. I invariably do the flap-splitting operation devised by Lawson Tait, making the alteration in the technique of stitching the raw surfaces together in layers with buried catgut sutures. A Pezzer retaining catheter is inserted into the bladder and remains for a week; the vagina is plugged with a gauze tampon powdered with boric acid, and the patient is then transferred to the Trendelenburg posture. Surgeon and assistants meanwhile put on fresh sterile gloves before undertaking the abdominal part of the operation. The parietal incision is made in the middle line, the lower end reaching the pubes below. After opening the peritoneum the pelvic contents are examined; the uterus is grasped with forceps and pulled upwards. The intestines are then packed off afterwards with gauze mops. Each round ligament is seized with clip forceps about its centre. Another pair of forceps is passed through each broad ligament close to the uterus and 1 to 2 inches below its superior margin, care being taken to avoid the veins of the pampiniform plexus. The round ligaments are now caught in the forceps, passed through the broad ligaments, and drawn through the latter until their loops meet behind the uterus. A strong silk suture is passed through them, including the back of the uterus, and is tied. In severe cases of prolapse a second suture is inserted in the same way an inch lower down to obtain a broader sling from which the uterus hangs. The position of the uterus is now entirely changed. It is raised high up in the pelvis, anteverted, and lying on the bladder. The broad ligaments are tightened up by the passage of the round ligaments through them; the uterosacral ligaments are also drawn upwards, and both anterior and posterior vaginal walls are tightened. As soon as the patient is released from the Trendelenburg position the intestines fall down into Douglas's pouch, and this should be seen before closing the abdomen. The abdominal wall is sutured in tiers, the wound is painted with iodine and dressed with aseptic gauze and wood-wool wadding.

After-treatment.—The vaginal tampon is removed in two days, after which a douche of 1 in 5000 sublimate lotion is given night and morning. A simple enema is administered every day. The Pezzer catheter remains in the bladder for a week and urine is allowed to escape at six-hourly intervals by removing the plug in the end of the catheter. During this time large quantities of distilled water (half a gallon per day) should be drunk by the patient to prevent the deposit of salts on the catheter from the urine. No restriction is made as to the position the patient may select as she lies in bed, where she remains for three weeks.

The after-history in all of the cases on which I have performed this operation is excellent. No bladder trouble such as might be expected is complained of, the patients being able to retain their urine for as long as eight hours.

One patient (Case 4) returned complaining of "something coming down," but examination showed the uterus to be high up in good position. There was, however, a slight prolapse of the anterior vaginal wall, but the bladder was not affected, and this was rectified by removing an elliptical portion of the mucous membrane. In this case the prolapse was of many years' standing, and the vaginal mucous membrane was very much thickened from exposure and friction on the patient's thighs.

Appended herewith is a list of all the cases I have operated on up to the end of last year. As none of these patients have become pregnant since the operation I have had no opportunity of recording the behaviour of the uterus during this period and subsequently. It is not too much to hope that the round and broad ligaments with their muscular

and elastic tissue will accommodate themselves to the growing requirements of the enlarging uterus and return to their normal condition when it has emptied itself, as we know these ligaments do in the normal state.

TABLE I.—*Cases of Retroversion of the Uterus for which Suspension only was performed.*

Case.	Age.	Date of operation.	History.
1	42	6/1/10	No children. Dysmenorrhœa. "Bearing-down" pains. Uterus retroverted and enlarged.
2	29	5/4/10	Ill for nine months. Three children. Youngest 3 years. Metrorrhagia and dysmenorrhœa. Uterus retroverted and enlarged.
3	20	16/8/10	"Pain and falling of the womb." No children. Frequent micturition. Uterus retroverted and pushed down. Cystic swelling in Douglas's pouch size of goose's egg. Right cystic ovary removed. Uterus suspended.
4	37	18/11/10	Three children, youngest 6. Metrorrhagia and menorrhagia. Uterus retroverted and enlarged (4½ in.).
5	39	21/11/10	No children. Menorrhagia and dysmenorrhœa. Uterus retroverted and enlarged.
6	24	—	—

TABLE II.—*Cases of Prolapse of the Uterus for which Suspension and Perineorrhaphy were performed.*

Case.	Age.	Date of operation.	History.
1	35	30/6/09	Frequency of micturition for eight years. Complete prolapse for six years. Four children, youngest 3 years. Perineum torn to rectum.
2	35	23/7/09	Complete prolapse for two years. Four children, youngest 4 years. Perineum ruptured.
3	38	28/7/09	Complete prolapse since birth of last child two years ago. Perineum torn.
4	42	31/8/09	Complete prolapse for 14 years. Cervix very elongated. Four children, youngest 9. Perineum torn. Subsequent colporrhaphy for prolapse of vaginal mucosa.
5	43	11/11/09	Slight prolapse and cystocele. Four children, youngest 9. "Bearing down" and frequency of micturition. Perineum torn.
6	35	10/1/10	Slight prolapse and retroversion. Menorrhagia. Frequent desire to micturate. Three children, youngest 18 months. Perineum torn.
7	67	23/1/10	Complete prolapse for 20 years. Uterus constantly outside vulva.
8	35	24/2/10	Two children, 6 and 1½ years. Perineum torn at first confinement. Uterus prolapsed slightly after this; completely since last child was born.
9	42	19/4/10	Seven children, youngest 5. Complete prolapse for seven years. Perineum torn.
10	42	11/5/10	Six children, youngest 7. Complete prolapse for some years. Perineum torn into rectum.
11	28	1/6/10	Three children, youngest 2. Has had "bearing down" since birth of last child. Complete prolapse. Perineum torn.
12	73	16/6/10	Ten children, youngest 32. Complete prolapse for many years. Patient unable to go about.
13	32	24/6/10	Complete prolapse since birth of last child eight years ago. Frequency of micturition. Perineum torn.
14	56	26/8/10	Six children, last 18 years ago. Constant desire to micturate. Complete prolapse for several years. Perineum torn.
15	39	28/8/10	Six children, youngest 5. Complete prolapse for three years. Perineum torn.
16	24	24/9/10	One child, 18 months ago. Large cystic swelling in Douglas's pouch. Uterus retroverted and prolapsed, but not outside vagina. Small ovarian cyst removed from left side. Uterus suspended. Perineorrhaphy.
17	38	28/9/10	Ten children, last seven weeks ago. Uterus prolapsed for four years. Perineum badly ruptured.
18	30	3/10/10	Three children, youngest 11 months. "Falling of womb" for two years. Perineum torn at first confinement.
19	26	2/11/10	Three children, youngest 2. Has had a "bearing down" since birth of first child. Complete prolapse. Perineum torn.

Sunderland.

PHTHISIS IN WALES.

By HUGH R. JONES, M.A., M.D. CANTAB.,
B.Sc. LOND., D.P.H.

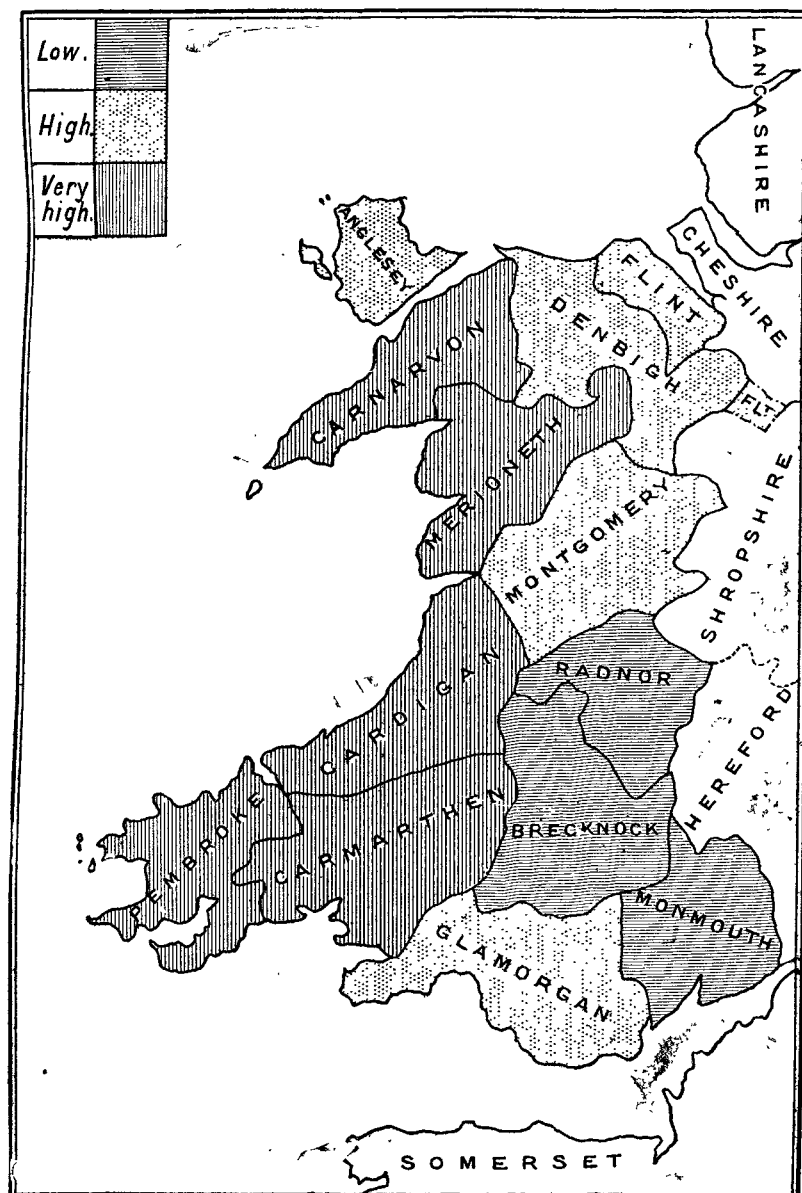
In the Registrar-General's report for 1909, corrected death-rates are published for the quinquennium 1905-09, for 18 counties in which the highest mortality from phthisis was recorded. (Table I.) Ten of the 18 counties were Welsh, and in six of them the mortality was higher than in any English county. Yet the death-rate from phthisis in Wales has fallen fully 37 per cent. during the last 25 years—from 2·04 per 1000 in 1881-1890 to 1·28 in 1900-09, while that in England and Wales fell 33 per cent.—from 1·77 in 1881-1890 to 1·19 in 1900-09.¹

TABLE I.—*Corrected Phthisis Death-rates per Million.*

Phthisis 1905-09.	Persons	Males	Females
England and Wales	1125	1325	938
England, excluding Monmouthshire	1120	1333	920
Wales, including Monmouthshire...	1213	1195	1229
Cardiganshire... ..	2237	2320	2159
Carmarthenshire	1525	1409	1633
Merionethshire	1512	1567	1462
Carnarvonshire	1501	1588	1420
Pembrokeshire	1393	1383	1401
Anglesey	1356	1167	1534
Montgomeryshire	1217	1316	1125
Flintshire... ..	1151	1284	1026
Brecknockshire	1148	1031	1257
Glamorganshire	1134	1122	1145

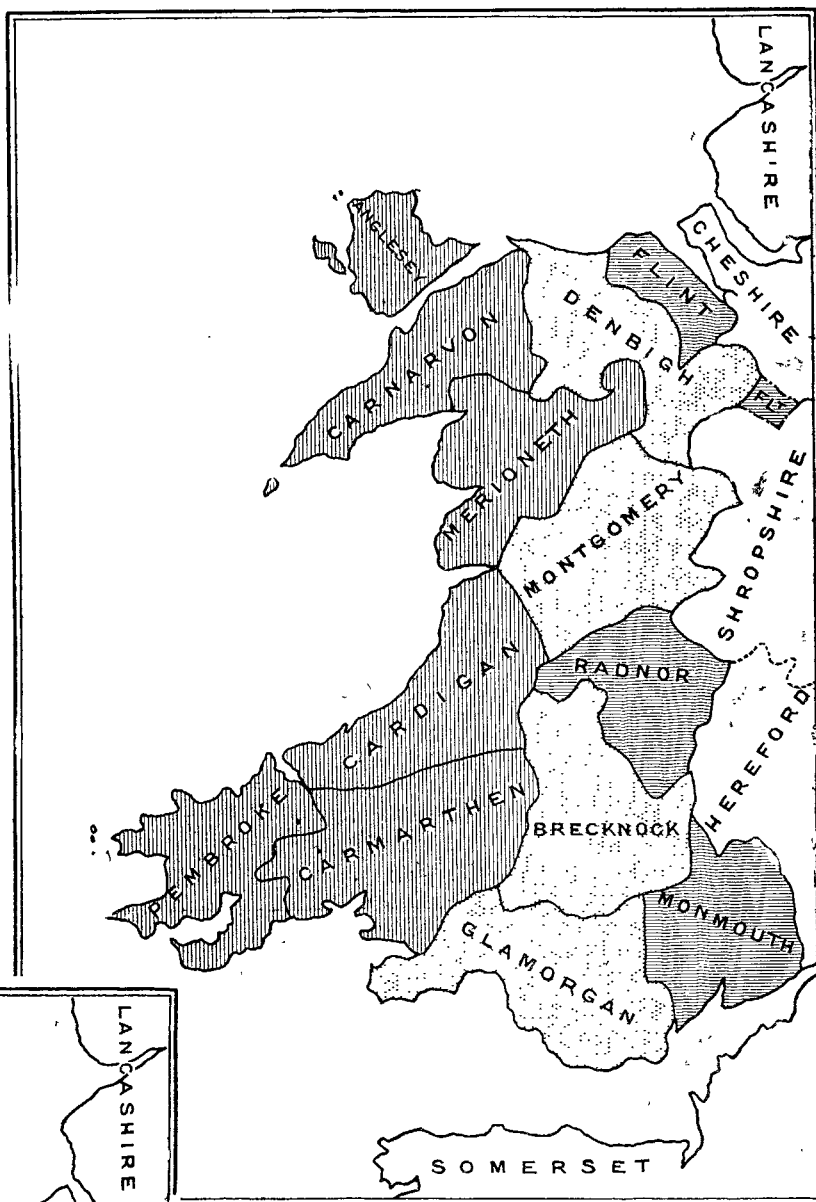
¹ Crude death-rates are quoted unless otherwise stated.

FIG. 1.



Distribution of phthisis (males), 1904-08, in Wales.

FIG. 2.



Distribution of phthisis (females), 1904-08, in Wales.

The mortality of males in Wales is, however, less than that in the whole country—1·30 per 1000 compared with 1·40 for the decennium 1900-09—notwithstanding that it was in excess in 5 out of the 12 Welsh counties. It is intermediate between the mortality in the urban and rural counties. It must be remembered that there are no unhealthy industries in Wales, and that two of the chief occupations—viz., mining and agriculture—are favourable to a low mortality from phthisis, while the mortality in a third—stone and slate quarrying—though twice as high as in the others, is not much above the average, the comparative mortality figures being for all occupied males, 175; coal-miners (South Wales and Monmouthshire), 93; stone and slate quarries, 186; and agriculturists, 79. The recorded mortality of males cannot therefore be regarded as satisfactory.

On the other hand, the mortality of females is very much higher than in the whole country (being 1·27 per 1000, compared with 0·99), with the result that the phthisis mortality of both sexes in Wales exceeds that for England and Wales by 0·09 per 1000. The female mortality in Wales is lower than the male mortality only by 2·3 per cent., while for the whole country it is lower by more than 29 per cent.

If the statistics of South and North Wales be compared it is seen that while the mortality of

TABLE II.—*Crude Phthisis Death-rates per Million, 1904-08.*

	Males.	Females.
England and Wales	1362	963
South Wales	1215	1260
North Wales	1407	1261

females is nearly the same in both divisions, the male mortality is appreciably higher in North Wales than in South Wales. (Table II.)

The counties with the highest mortality—both male and female—are situated on the west littoral, those with the lowest mortality on the English border, and the mortality in the intervening counties is intermediate. (Table III., Figs. 1 and 2.)

TABLE III.—*Welsh Counties—Crude Phthisis Death-rates per Million, 1904-08.*

Males.		Females.	
Cardigan.	2304	Cardigan.	2134
Merioneth.	1762	Carmarthen.	1613
Carnarvon.	1663	Carnarvon.	1524
Carmarthen.	1434	Anglesey.	1433
Pembroke.	1358	Merioneth.	1428
		Pembroke.	1346
Montgomery.	1296		
Flint.	1238	Brecknock.	1205
Denbigh.	1167	Glamorgan.	1128
Anglesey.	1164	Montgomery.	1087
Glamorgan.	1121	Denbigh.	1038
Brecknock.	1008	Radnor.	974
Radnor.	616	Flint.	960
Monmouth.	948	Monmouth.	929
Hereford.	1048	Hereford.	913
Salop.	1076	Salop.	863

Reference to the maps shows how the mortality from phthisis increases from East to West.

Coincidentally with the fall in the death-rate from phthisis in England and Wales, the age of maximum mortality from phthisis has been postponed both in males and in females. In 1851-60 the maximum male mortality occurred between the ages of 20 and 25 years, in 1861-70 between the ages of 35 and 45 years, and in 1891-1900 between the ages of 45 and 55 years. The maximum mortality among females in 1861-90 was between the ages of 25 and 35 years, and in 1891-1900 between the ages of 35 and 45 years.

In Wales a sustained high mortality of males between the ages of 20 and 65 years was recorded in the three decennia 1881-90, 1891-1900, and 1900-09 (Table IV., Figs. 3 and 4);

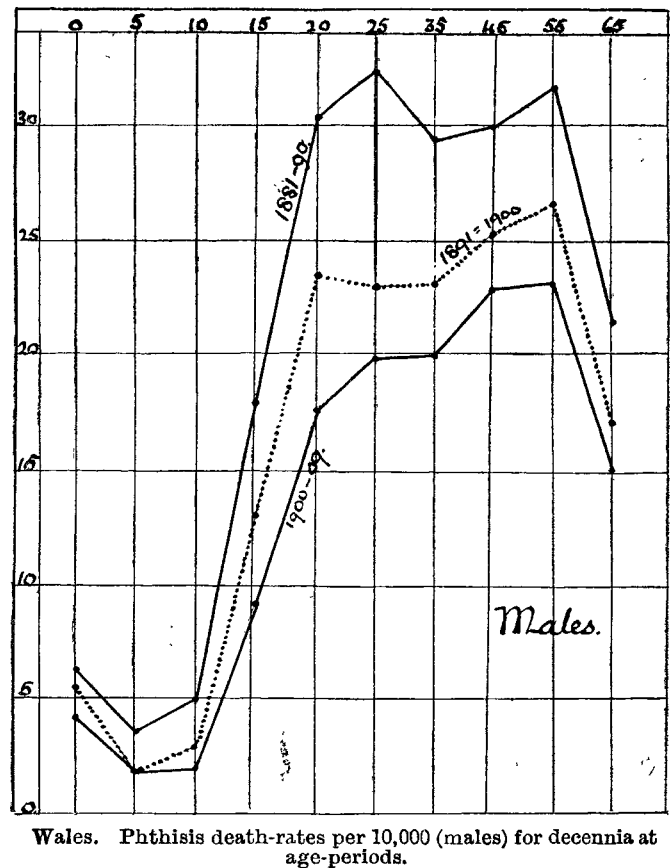
TABLE IV.—*Wales—Phthisis Mortality per 100,000 in Three Decennia.*

Age-period.	Males.			Females.			Persons.		
	1881-90.	1891-1900.	1900-09.	1881-90.	1891-1900.	1900-09.	1881-90.	1891-1900.	1900-09.
0—	63	56	42	61	46	34	62	49	38
5—	36	17	17	47	28	21	41	22	19
10—	49	29	20	110	72	57	80	50	39
15—	178	130	93	277	194	143	226	160	118
20—	303	234	174	335	240	181	319	237	177
25—	323	230	197	372	267	220	346	248	208
35—	293	231	198	329	253	203	311	242	201
45—	297	253	227	237	185	160	266	219	194
55—	316	265	231	198	159	129	255	208	178
65—	214	169	151	115	96	82	160	128	113
All ages ...	196	153	130	210	157	127	204	156	128

The 1900-09 figures supplied by the Registrar-General.

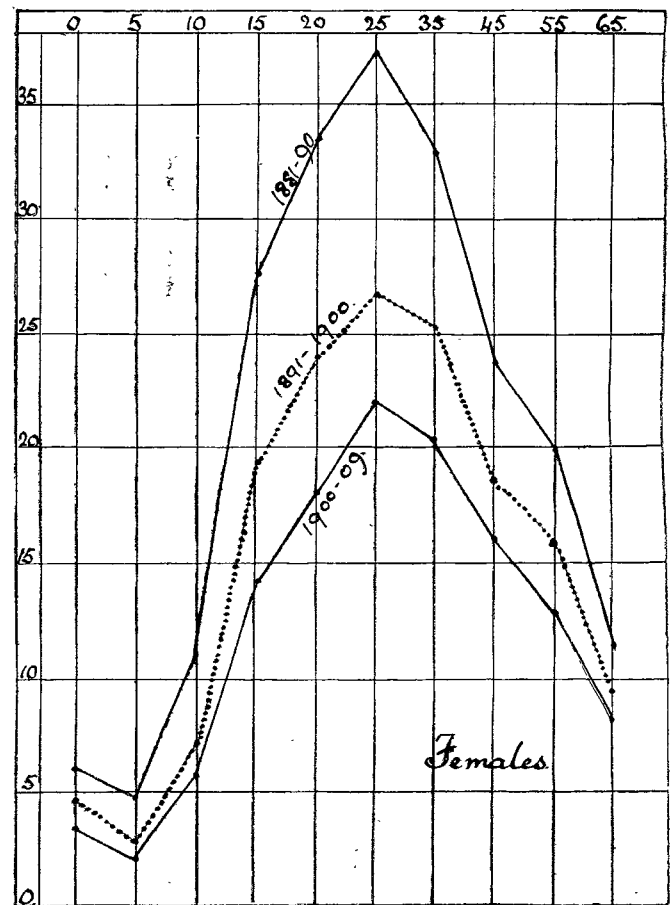
but a similar postponement of the age of maximum mortality is observed—from the age-period 25-35 in 1881-90 to the 55-65 period in the last two decennia. Among females the mortality rose to a maximum at the age-period 25-35 in the

FIG. 3.



Wales. Phthisis death-rates per 10,000 (males) for decennia at age-periods.

FIG. 4.



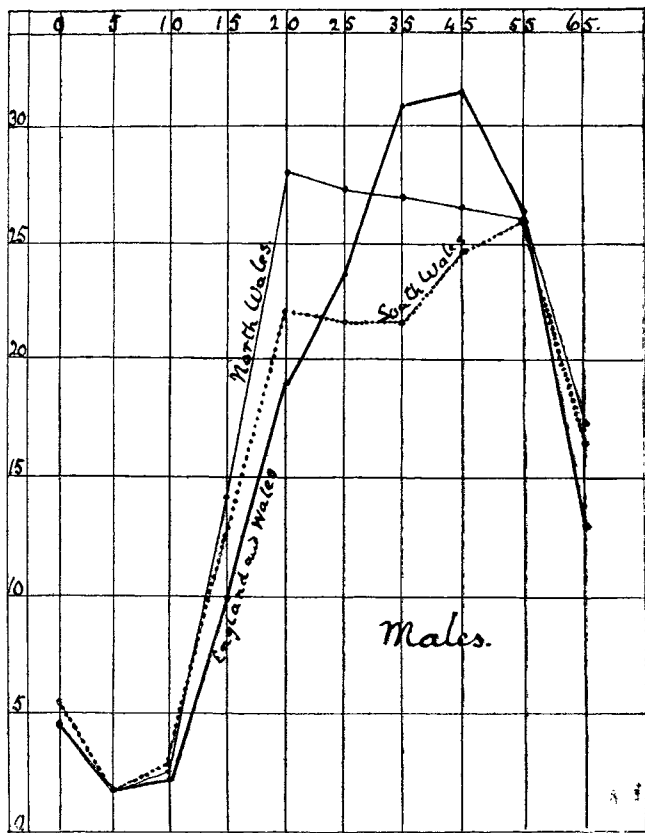
Wales. Phthisis death-rates per 10,000 (females) for decennia at age-periods.

three decennia, but the duration of the period of very high mortality is shorter than among males.

For comparison, the death-rates of males and females (North Wales, South Wales, and England and Wales) have been charted for the decennium 1891-1900. (Table V., Figs. 5 and 6.) Except for the earlier age of maximum mortality in the

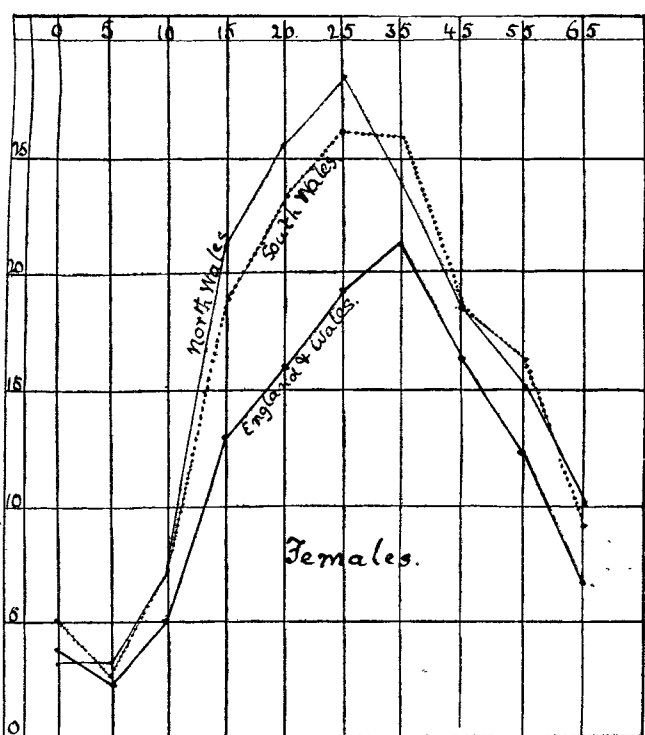
Welsh divisions, the three curves of female mortality are very similar in form. The curve for South Wales shows that the age of maximum mortality is being postponed. The curves of male mortality in the Welsh divisions differ materially in form from the curve for England and Wales. In North Wales the age of maximum mortality is 20-25 years, and a high rate of mortality is maintained until the 55-65 age-period.

FIG. 5.



1891-1900. Phthisis death-rates per 10,000 (males) at age-periods.

FIG. 6.



1891-1900. Phthisis death-rates per 10,000 (females) at age-periods.

In South Wales a similar period of high mortality is recorded, but the maximum mortality occurs at the 55-65 age-period. In England and Wales the mortality from phthisis increased to a maximum at the 45-55 age-period. At the earlier age-periods it was lower than the mortality in Wales, but in the 25-35 age-period it exceeded that of South Wales, and in the next age period that of North Wales also. The discussion of the significance of the differences in the age incidence of phthisis must be deferred until the county statistics for the last decennium are published.

TABLE V.—*England and Wales, 1891-1900. Death-rates from Phthisis at Age-periods per 100,000 living.*

Age-period.	Males.			Females.		
	England and Wales.	South Wales.	North Wales.	England and Wales.	South Wales.	North Wales.
0—	44	55	45	38	51	32
5—	17	17	17	24	26	33
10—	23	29	27	50	71	72
15—	99	125	142	129	188	211
20—	189	221	280	159	233	256
25—	237	216	272	192	261	284
35—	309	216	269	212	259	239
45—	314	247	265	164	186	185
55—	262	260	261	124	162	152
65—	130	166	173	67	92	102

Liverpool.

NOTES ON THE CLINICAL APPEARANCES IN TWO CASES OF CEREBRAL DISEASE,

ONE BEING GRAVE ORGANIC DISEASE AND THE
OTHER PURELY FUNCTIONAL.

BY JOHN H. AYTOUN, M.B., C.M. EDIN.

MY reason for publishing the two following cases is to show the resemblance which a case of grave organic disease of the brain may bear to one of purely functional disease of that organ; and also to show the difficulty which may exist in general practice in making a diagnosis in such cases. In both cases a correct diagnosis was made, but in neither of them could it be made for at least several hours from the time that they were first seen.

CASE 1.—The patient was a female, aged 29 years, born in the North of Scotland. Her mother had died at an advanced age. Her father, when I first saw her, was still alive and in fair health at the age of 60 years. Two of her father's brothers had died from apoplexy with paralysis, in each case the attack beginning after the age of 40 years. The patient had never been very robust. Some years before the attack for which I attended her she fell, injuring the dorsal region of her back. This part subsequently had the actual cautery applied. Since then she had always worn a poro-plastic support round the chest. She was a person of considerable intelligence, earning her living by acting as a housekeeper, but her work was light. She took her meals quite regularly and was strictly temperate. For some months before her attack she had become most religious and had attended a number of missionary and other religious meetings. During this time, also, she often complained of a feeling of weakness and of breathlessness on exertion. It was noticed that she was unusually pale. Her employer said that for a week before her attack she was "queer." She seemed, however, to be in her usual spirits, and on the evening before her attack she went with her employer to call on some friends. On the day before her attack she told her employer that she had a peculiar sensation in her right arm. On the morning of her attack she got up as usual, made breakfast, and took some herself. After breakfast she went on with her ordinary work. Very soon she complained to a neighbour of feeling ill, and said that the left side of her head (pointing to the temporal region) was very painful. She was immediately put to bed in her clothes. She vomited a small quantity of bile-stained frothy liquid—the vomiting being accompanied by a considerable amount of gurgling in the abdomen. She moved about uneasily in bed and moaned frequently. At 10 A.M. I saw her for the first time; this was an hour after she became ill. She was lying in bed in her clothes, slightly on the right side. Her face was very pale. She rolled about in bed a little, and occasionally vomited a small quantity of mucus. Her eyelids were quite closed. On raising the eyelids the pupils were seen to be of equal size and neither