To what circumstances, then, are we to ascribe the difference in the fatality resulting from injuries and burns in these two regions? After careful consideration, I can offer no better explanation than that the cause is to be sought for in injury or shock inflicted on the large and numerous ganglia of the sympathetic system so plentifully distributed in the abdominal region, and the ramifications from which are so closely intertwined round the viscera and large blood-vessels, and, by direct communication, must influence that source from which the heart and lungs derive their principal nervous supply,—in this way accounting for the rapid sinking and the low form of the inflammatory action excited in these cases.

I can only regret that my position as a country surgeon debars me in great measure from consulting the literature connected with this subject.

ARTICLE IX.—*Some Statistics of Idiocy.* By ARTHUR MITCHELL, M.D., Deputy Commissioner in Lunacy.

I. *Sex.*

THE number of idiots and imbeciles examined was 1345. Among these the distribution of the sexes was as follows:—

TABLE I.

	Male.	Female.	Male.	Female.
Idiots,	430	284, or	100 to	66·0
Imbeciles,	321	310, or	100 to	96·5

Total Idiots and Imbeciles, 750 594, or 100 to 79·2

From this it appears that amongst idiots and imbeciles there are more males than females, there being only 79 of the latter to every 100 of the former. The reverse of this holds good, under every circumstance, among those labouring under the acquired, as opposed to the congenital forms of insanity. The terms *acquired* and *congenital* are here used for the sake of convenience and brevity, as it is well understood what they are intended to cover.

It further appears that this excess of males over females is chiefly manifested among those labouring under the graver forms of the disease,—among *idiots* the excess rising as high as 100 males to 66 females.

In order to test the *steadiness* of these results, I shall divide the 1345 into two groups of 566 and 799,—the first having been chiefly seen in southern, and the last in northern, counties of Scotland.

Taking the first group, consisting of 566, we have:—

TABLE II.

	Male.	Female.	Male.	Female.
Idiots,	205	143, or	100 to	69·7
Imbeciles,	104	114, or	100 to	109·6

Total Idiots and Imbeciles, 309 257, or 100 to 83·1

Here, again, we find a similar and well-marked excess of males over females, when we deal with the total number of idiots and imbeciles, and in this instance we find that the excess occurs entirely among the *idiots*, since here the female *imbeciles* actually exceed the male.

If we take the second group, consisting of 779, we have as follows :—

TABLE III.

	Male.	Female.	Male.	Female.
Idiots,	225	141, or	100 to	63·5
Imbeciles,	217	196, or	100 to	90·3
<hr/>				
Total Idiots and Imbeciles,	442	337, or	100 to	76·2

There is a very striking and intimate similarity between these figures and those in the first table,—a similarity, indeed, which amounts to a substantial identity. When all three tables are considered together, they lead us very safely and surely to the following conclusions :—

(1.) That the excess of male over female idiots and imbeciles, taken together, is considerable and steady.

(2.) That the excess of males is much greater among idiots than among imbeciles ; in other words, that the excess of males is most marked in the graver forms of the disease.

(3.) That even among imbeciles, when we deal with large numbers, it will probably be always found that males exceed females, though not to a great extent.

II. Age.

The following tables embrace the same cases, 1345¹ in number, which were embraced in the tables having reference to sex ; and, in the analysis which is made to determine the *steadiness* of the results, the same grouping is resorted to.

TABLE IV.

Age.	Idiots.	Imbeciles.	Total Idiots and Imbeciles.	Per 1000.
0-5	5	0	5	3·7
5-10	44	7	51	37·9
10-15	87	18	105	78·1
15-20	100	50	150	111·5
20-30	194	133	327	243·1
30-40	122	146	268	199·2
40-50	81	109	190	141·3
50-60	57	94	151	112·3
60-70	21	48	69	51·3
70-80	3	22	25	18·6
80-90	0	4	4	2·9

¹ It must be borne in mind that this number probably includes 90 per cent. of *all* the idiotic and imbecile persons in the districts in which the observations were made,—the *very young*, however, being excepted.

It appears, therefore, that more idiots and imbeciles are found between the ages of 20 and 30 than in any other decennial period. The ten-year periods, on each side of this one, are those which come next. Of the 1345 idiots and imbeciles examined, the ages of 850, or about 63 per cent., lay between 10 and 40 years.

The number below the age of 10 is small—much smaller than it should be, for reasons which will be afterwards explained. But even if all those below 10 were known, it is almost certain that their number would not be so large as that of those between 10 and 20, or 20 and 30. The mortality of idiots in infancy and childhood is very large, and in this period there is little difference between the rate of receiving fresh cases and the rate of loss by death. With idiots, however, those who reach 15 or 16 acquire a tolerably certain tenure of life for a second stretch of 10 or 15 years. That period, therefore, receives additions at a rate above the rate which represents its losses by death, and an accumulation follows. After the age of 30 the reverse holds good. More are passed into the decennium—30 to 40—than leave it for the next. In other words, there are more deaths than admissions, and thus a thinning of the numbers begins, which goes on with accelerated force as greater ages are dealt with.

I think this table also shows that a larger number of idiots and imbeciles attain the full measure of life than we have been accustomed to believe to be the case. Out of 1345 we have no fewer than 249 above the age of 50, 98 above 60, 29 above 70, and 4 above 80.

Fewer idiots than imbeciles, however, reach an advanced age. Thus, while we have only 11·3 per cent. of the idiots, we have not less than 26·6 per cent. of the imbeciles above 50. It would appear, in short, that the lower the type of the mental defect the sooner comes virtual old age and death.

The actual proportion of weak-minded and idiotic *children* is to a certainty much larger than appears in this table. In very early life the deficiency of intellect in many cases is not acknowledged, or perhaps is not seen, by the parents and friends of the child, and so his defect becomes practically an unknown thing. It is thus, I think, we must account for the seemingly small number of *young* idiots and imbeciles. Of course, the greater the defect is, the more likely it is to be seen and admitted in childhood, and accordingly we find that we have 161 *idiots*, or 22·5 per cent. below the age of 15, while we have only 25 *imbeciles*, or 3·9 per cent. below that age. This fact comes forward as a proof of the accuracy of the manner in which the absence of the young from the table has been accounted for.

As illustrative of the substantial steadiness of the distribution of ages among the idiotic and imbecile, Table IV. has been divided into two groups, and the result is shown in the table which follows:—

TABLE V.

Ages.	<i>First Group of 566. Idiots and Imbeciles.</i>	<i>Second Group of 779 Idiots and Imbeciles.</i>
0-5	1	4
5-10	12	39
10-15	35	70
15-20	60	90
20-30	134	193
30-40	117	151
40-50	93	97
50-60	80	71
60-70	26	43
70-80	7	18
80-90	1	3

We are here dealing with those who labour under what is called congenital insanity. As the vast majority of the inmates of our public asylums labour under what may be regarded as acquired insanity, the distribution of ages among them may be taken for the purposes of comparing the distribution in the one class with that of the other. The ages of 3630 of the inmates of 28 of our public asylums were ascertained during the taking of the census of 1861, and these, reduced to the proportion in 1000, are given in the following table, and contrasted with the ages of the 1345 idiots and imbeciles similarly reduced.

TABLE VI.

Ages.	<i>Inmates of Asylums. Per 1000.</i>	<i>Idiots and Imbeciles. Per 1000.</i>
0-5	0.0	3.7
5-10	0.0	37.9
10-15	1.6	78.1
15-20	14.0	111.5
20-30	147.9	243.1
30-40	249.6	199.2
40-50	252.9	141.3
50-60	186.5	112.3
60-70	111.8	51.3
70-80	29.8	18.6
80-90	4.9	2.9

From this table it appears that we have three times as many idiots and imbeciles below the age of 30 as we have of those labouring under the acquired forms of insanity—the proportions being as 47.4 per cent. to 16.4 per cent.—nearly one-half of all the idiots and imbeciles known being below the age of 30. It follows, of course, that the difference between these two classes of the insane above the age of 30 will differ greatly in an opposite way,—83.5 per cent. of the inmates of asylums, and only 52.5 per cent. of idiots and imbeciles, being above that age.

III. *Comparative frequency of Births of Idiots in First and Subsequent Pregnancies.*

Among 443 idiots and imbeciles consecutively examined, I found 138 first-born, or 31·1 per cent., and 89 last-born, or 20·1 per cent.

When it was known, however, that almost every sixth idiot in Scotland was illegitimate (663 idiots and imbeciles giving 108 illegitimate, or 17·1 per cent.), it was thought that an element of disturbance was probably thus introduced into the foregoing figures, which might affect their value. The great majority of illegitimate children are known to be *first-born* and *only* children; while not a few of them are *last-born*, though the last of a small number of pregnancies,—say of two or three. It was, therefore, thought desirable that a fresh series of observations should be made, excluding the illegitimate, and dealing only with those born in marriage. It was also thought well to confine these observations to those cases in which not more than one idiot occurred in a family, and in which the idiocy was noticed very soon after birth—that is, in which it was probably congenital. Further, no cases were accepted but those in which the mothers at the time of the inquiry had passed the age of child-bearing, though some of them I think were widows before that age was reached. All these restrictions made it difficult to obtain a large series of observations, and account for their number not exceeding 85,—44 males and 41 females.

I sent my results in detail to Dr Matthews Duncan, who kindly drew up for me the two Tables VII. and VIII., embodying the facts in a way which makes their teaching apparent.

TABLE VII. *Showing the Comparative Frequency of Births of Idiots, and of ALL Births in First and Subsequent Pregnancies.*

No. of Pregnancy.	Per-centage of all Births.	Per-centage of Idiot Births.
1st	22·8	33·0
2d	17·7	18·8
3d	15·5	17·6
4th	12·1	2·4
5th	9·4	2·4
5th	7·4	2·4
7th	5·2	7·0
8th	3·9	3·5
9th	2·6	2·4
10th	1·3	7·0
11th	·9	3·5

This table is read in this way:—Of *all* the children born in Edinburgh and Glasgow in 1855, 22·8 per cent. were first pregnancies, while of the 85 idiots 33 per cent. were first pregnancies, and so on.

What the table appears to teach is briefly this:—That idiocy is more likely to occur among first and latest (7th to 11th) pregnancies than among others. This is substantially the same thing

as was taught by the first inquiry, which included 443 cases, and in which all that was asked was whether the patient was first-born or last-born.

IV. *Age of Mother of Idiot at time of Birth of Idiot.*

The same 85 cases are used in the following table which were used in Table VII.

TABLE VIII.—*Showing a Comparative Percentage of the Children born at different ages of Mothers to ALL Children born, and of the Idiots born at different ages of Mothers to ALL Idiots born.*

Age,	20-24	25-29	30-34	35-39	40-44	45-49
P. C. of all Children, . .	22·62	39·99	23·61	14·76	5·15	0·58
P. C. of Idiots,	25·88	25·88	10·58	10·58	23·53	3·53

This table is read thus:—Of all children born in Edinburgh and Glasgow in 1855, 22·6 per cent. were born of mothers whose ages were from twenty to twenty-four years; while of the 85 idiots 25·8 per cent. were born of mothers of corresponding ages; and so on.

What we learn from the table is this:—That mothers under twenty-four years of age and above thirty-five are those more specially liable to have idiocy in their children.

V. *Size of Idiot's Head.*

During some months I measured the head of *every adult* idiot examined. There was thus no selection of cases. The lowest age of those examined was twenty-one. It will be at once apparent, that it was necessary to confine the observations to *adults*, in order to make a comparison with the ordinary sane population possible. Various measurements were made, but I shall here deal only with one, viz., the circumference, which was ascertained in the usual manner. The whole number of observations was 123, and the results are given in the subjoined table.

TABLE IX.

Circumference of Head in Inches.	MALE IDIOTS.		FEMALE IDIOTS.		Average Male Head in Scotland. From Hatters' Sales.
	Total.	Per Cent.	Total.	Per Cent.	Per Cent.
From 16 to 17 inches	...	...	...	...	...
" 17 to 18 "	2	2·9	2	3·6	...
" 18 to 19 "	2	2·9	4	7·3	...
" 19 to 20 "	6	8·8	11	20·0	...
" 20 to 21 "	17	25·0	19	34·5	6·2
" 21 to 22 "	23	33·8	16	29·1	29·9
" 22 to 23 "	12	17·7	3	5·5	55·5
" 23 to 24 "	5	7·4	...	...	7·7
" 24 to 25 "	1	1·5	...	...	0·7
Total,	68	100·0	55	100·0	100·0

(1.) As regards *males* the sum of the circumferences of the 68 was $1434\frac{1}{4}$ inches, which gives an average of $21\frac{1}{8}$, corresponding to the hat the size of which is known as " $6\frac{3}{4}$ small." Most of the six heads which had a circumference above 23 inches were unmistakably hydrocephalic, and so I think were some of those between 22 and 23 inches.

The average male head of Scotland, as learned from Hatters' sales, is "size $7\frac{1}{8}$," which is understood to represent a circumference of $22\frac{3}{8}$ or rather less. This being the case, the average adult male idiot's head is more than an inch less in circumference than the average head of the ordinary adult male population.

It will be seen from the last column of the table, that it is so rare a thing for a hatter in Scotland to sell a hat below 20 inches, as to be practically a thing which never occurs.

(2.) As regards *females*, the sum of the circumferences of the 55 was $1129\frac{1}{4}$, which gives an average of $20\frac{1}{2}$, corresponding to the hat the size of which is known as " $6\frac{1}{2}$." We do not know the average size of the ordinary adult female head, with which to compare this.

The difference between the size of the heads of male and female idiots is on the average $\frac{1}{8}$ ths of an inch, and this is not more than the difference between the heads of the two sexes in the ordinary sane population.

The general conclusion to which these figures distinctly lead is this:—That the heads of idiots as a rule are abnormally small, but that a small head is not an essential in idiocy.

ARTICLE X.—*Case of Death while under the Influence of Chloroform.* By JAMES D. GILLESPIE, M.D., F.R.C.S.E., Surgeon to the Royal Infirmary, Edinburgh.

(Read before the Medico-Chirurgical Society, 20th December 1865.)

I THINK it is the duty of every member of this Society to bring under its notice anything very unusual or startling in his practice; and, though in the present instance it is a most painful task, I have taken the first opportunity in my power of narrating to you a case of death while under the influence of chloroform which unfortunately occurred lately, and which, notwithstanding the innumerable cases of inhalation of this anæsthetic agent that I have witnessed since its introduction, is the only one attended with fatal results in my personal experience.

About the middle of November, a young lady, nearly seventeen years of age, who had repeatedly taken chloroform for the purpose of painless tooth extraction, begged of me as a great favour to