again to the level it originally occupied. Once more the skill of the surgeon, and, indeed, his reputation, is to be measured by the chronometer, and with the aid of the latest scientific—and popular—invention, the kinematograph, the powers of various men are to be judged of by the rapidity of their work. Not only so, but these records are to be handed down to posterity, and the operator is to be made to feel that he is not merely pitted against his contemporaries, but against all the surgeons of the future in this and all other countries. May it not follow as a matter of course that we shall vie with one another as to the rate at which we can open the abdomen, tear out the tumour, and sew all up again before the accusing film can have run half its course? Unfortunately the kinematograph will not record the after-condition of the patient, or the deaths which will inevitably follow from secondary or consecutive hæmorrhage, sepsis, or the miseries due to new adhesions, fæcal fistula, and the like. Rapidity in operative work is to be made a fetish, to which we shall all, for a time at least, have to bow.

All, I say, but that is not so. Level-headed surgeons—and they are the majority—will, I am certain, refuse. Rapidity, like all other things which carry with them this possibility of fetishism, is a good thing—a thing to be aimed at in its due proportion. Its opposite—dawdling or fumbling—is most strongly to be avoided, to be reprobated. But rapidity is good only when used in its true and fitting relation to other things. Always the main end to be kept in view is the sound and perfect restoration to health of the patient; and we must get that, or as near to that as possible, by the use of all these means in their due relation to one another.

The risks of undue rapidity—of racing—are many. Consecutive hæmorrhage is one of the most likely to occur. I watched carefully the reproduction of a hysterectomy by kinematograph at Edinburgh, and one of the things which struck me most forcibly was the extraordinary behaviour of the vessels in the abdominal wall. One stroke of the operator's knife and the abdominal cavity was open, one wipe down by the assistant with a piece of lint and all bleeding from the cut edges ceased. To go no further, what became of those vessels? Not a single pressure forceps was placed, not a vessel was ligatured, but there was no further bleeding—from those parts at least. I appeal to any surgeon who has ever done abdominal section if this is credible? If all parts are to be treated in the same way deaths from peritonitis afterwards are certain to be many. Clark and Waterhouse have shown that the peritoneum can deal with bacteria to a great extent if it is clean, but if any appreciable clots of blood are left behind or find later entrance peritonitis is promptly set up by the septic changes induced in such clots, where bacteria find a fitting breeding ground and immunity from rapid absorption and phagocytosis. Vessels treated in this lightning fashion will certainly bleed afresh when the force of the circulation recovers itself after the patient has returned to bed, when all is closed up and the mischief can progress unseen until it is too late to remedy. Will the kinematograph be re-introduced into the sick room and record for us the gasping, restless tossing of the exsanguine victim who is bleeding to death into her own abdominal cavity; or the hurried, anxious—often, alas! useless—groping of the surgeon with imperfect aid and light for the vessel now retracted into the subperitoneal tissues, or hidden under constantly increasing clot—that vessel which might so easily have been safely and finally secured in the morning had not the surgeon been racing against time in his devotion to the latest fetish of all—rapidity.

No protest can, I conceive, be too forcible against this new development of our art. Quick, nervous, prompt work is most desirable, but as all good things are liable to abuse, and such abuse is detestable in proportion to the very excellence of the thing abused, so racing in operative work is certain to entail results which will be as deplorable as those produced by careful rapidity are admirable. In surgery, as in everything else, a due perception of the proper perspective of things is absolutely necessary to produce perfect work.

Manchester.

TIVERTON INFIRMARY AND DISPENSARY.—The annual meeting of this institution was held recently under the presidency of Sir John Heathcote-Amory. The report showed that 1293 patients had been treated. The Victoria Wards, opened in August last by Lady Northcote, were now used by patients.

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION.

By PERCY JAKINS, M.D. DURH.,
SURGEON TO THE CENTRAL LONDON THROAT AND EAR HOSPITAL.

THE following consecutive series of 80 cases in which I have performed the radical mastoid operation (Stacke's) in cases of chronic suppurative otitis media serves to illustrate the symptoms demanding the performance of that operation and the beneficial results that may be expected. It should be premised that in all cases the procedure must be considered exploratory until the cavity of the antrum has been exposed, and by no method that I know can the medical man foretell with certitude what will be revealed. Broadly speaking, Stacke's operation consists in laying open the mastoid antrum and any diseased mastoid cells connected with it, opening the aditus leading from the antrum to the attic of the tympanum, cutting away all overhanging bone, removing the posterior wall of the osseous meatus, and in some cases removing the malleus and the incus. All morbid products, such as cholesteatoma, pus, granulations, and diseased bone, are then removed, the cavity is thoroughly cleansed and disinfected, the cartilaginous meatus slit, and the upper and lower flaps are cut away. This series of 80 cases could be increased to 124 by inclusion of 44 cases of Schwartze's operation, a procedure of similar import except that the posterior osseous wall of the meatus is left intact. All these additional cases have resulted in recovery. It should also be added that concurrently my colleague, Dr. Dundas Grant, has had a similar series of cases of something like equal number. I think I may say that the success of both of us has been largely due to mutual conference and coöperation.

The indications for the performance of the operation are various. Together with persistence of purulent discharge one or other of the following symptoms was presented by these patients previously to operation: pain in the affected ear or corresponding side of the head, vertigo, nausea, vomiting, and general malaise; in some cases there were mental lassitude and a sullen demeanour. In most of them one or more of the following conditions was present: polypi or granulations in the tympanum, tenderness over the mastoid process, swelling of the meatus, bulging downwards of the posterior superior wall of the meatus and the adjacent part of Shrapnell's membrane, facial paralysis, caries of the ossicles or dead bone felt by the probe in the walls of the cavum tympani. The symptoms and physical conditions mentioned were rarely found singly but were mostly grouped in varying proportions. In every case the necessity for the operation was fully proved by the discovery of granulations, cholesteatoma, or necrosed bone, in the antrum or in the surrounding parts. In several of the cases it was necessary in the course of the operation to lay bare the dura mater in the middle fossa of the skull, to a greater or less extent, by the removal of a lamina of necrosed bone in the roof of the antrum. For the same reason the groove of the lateral sinus also was sometimes exposed in taking away a small piece of its bony wall. It was only occasionally that the mastoid cells became involved and required to be dealt with.

In recommending the operation the question of the effect upon the hearing power was naturally of but secondary consideration. It is, however, gratifying to report that audition was seldom rendered worse by the performance of the operation, while in some cases it was materially improved, probably owing to the removal of the accumulations of pus, granulations, and cholesteatomatous material which had filled the tympanum and so prevented the sound waves from reaching the labyrinth.

An examination of the appended table shows that out of the 80 patients operated on 45 were females and also that in 49 cases the left was the ear affected. The preponderance of the female sex among the cases cannot be explained, for it is contrary to the statistics of the hospital with regard to all diseases of the ear, both acute and chronic. The preference for the left ear is in accordance with what is generally noted with regard to deafness, but especially in cases accompanied with any degree of acuteness of inflammation. Lennox Browne¹ found that in 32 cases of othæmatoma the left ear

¹ Othæmatoma, or the Insane Ear, West Riding Asylum Medical Reports, vol. v., 1875.

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION: TABULAR STATEMENT.

No.	Sex.	Age.	Ear.	Duration.	Symptoms previously to operation.	Date of operation.	Remarks.	Result.
1	F.	20	R.	18 years.	Recurrent polypi.	Oct. 13th, 1896.	Granulation tissue and cheesy matter in the antrum.	Cured.
2	F.	6	L.	—	Pain, nausea, and giddiness.	Oct. 31st.	Antrum contained granulation tissue.	"
3	F.	27	L.	—	Pain and giddiness.	" "	Granulation tissue and cheesy matter; dura mater exposed in the middle fossa.	"
4	M.	10	R.	—	Headache and mental dulness.	Nov. 20th.	Fetid pus in the antrum and granulation tissue.	"
5	F.	25	R.	8 years.	Recurrent polypi.	Feb. 5th, 1897.	Cholesteatoma in the antrum.	"
6	F.	17	R.	12 "	Recurrent polypi.	March 5th.	Granulation tissue in the antrum; lateral sinus exposed.	"
7	F.	19	L.	15 "	Recurring polypi, pain, and giddiness.	" 12th.	Antrum was very large, full of granulation tissue.	"
8	F.	13	L.	5 "	Swelling over the mastoid; pain.	May 6th.	Mastoid cells, antrum, and attic were full of granulation tissue and pus.	"
9	F.	12	R.	4 "	Pain, giddiness, and recurring polypi.	" 13th.	Cholesteatoma in the antrum.	"
10	M.	14	L.	5 "	Swelling over the mastoid; pain.	June 4th.	Pus and granulation tissue in the mastoid cells and antrum; the incus was removed.	—
11	F.	23	R.	17 "	Pain, nausea, and giddiness.	" 8th.	Mastoid cells and antrum contained pus and granulation tissue; the incus was removed.	Cured.
12	F.	25	L.	9 "	Recurrent polypi and pain.	" 18th.	Antrum was deep; granulation tissue.	"
13	F.	29	L.	20 "	Pain and giddiness.	July 16th.	Antrum was very deep; granulation tissue.	"
14	M.	13	L.	—	Pain and recurring polypi.	" 20th.	Antrum was full of granulation tissue.	"
15	M.	7	L.	14 days.	Sinus over the mastoid leading into the antrum.	August 3rd.	Antrum was full of granulation tissue and cholesteatoma.	"
16	F.	32	L.	14 years.	Facial paralysis, vomiting, and pain.	Oct. 21st.	Pus and granulation tissue in antrum.	"
17	F.	17	R.	15 "	Nausea, pain, and giddiness.	Nov. 19th.	Granulation tissue and cholesteatoma in antrum.	"
18	F.	25	R.	12 "	Pain, giddiness, and nausea.	" 30th.	Pus and granulation tissue; dura mater of the middle fossa and lateral sinus were exposed.	"
19	F.	11	L.	8 months.	Recurring polypi, pain, and facial paralysis.	" "	Mastoid cells were necrosed; antrum was full of granulation tissue; lateral sinus was exposed.	Facial paralysis. Cured.
20	M.	28	L.	20 years.	Recurring polypi, extreme pain, nausea, and giddiness.	Dec. 6th.	Full of granulation tissue; lateral sinus covered with granulation tissue and thrombosed; left internal jugular filled with pus.	Died Jan. 6th, 1898.
21	F.	40	L.	38 "	Irritability, giddiness, nausea, shivers, and pain.	Jan. 18th, 1898.	Antrum was very deep; cholesteatoma.	Cured.
22	M.	13	L.	12 "	Polypi; recurring facial paralysis.	March 15th.	Full of granulation tissue; lateral sinus was exposed.	Facial paralysis. Cured.
23	F.	28	L.	20 "	Nausea, pain, and giddiness.	April 19th.	Granulation tissue and cholesteatoma; necrosed bone.	Facial paralysis. Well in nine months.
24	F.	36	R.	25 "	Pain, shivering, vomiting, and giddiness.	" "	Granulation tissue.	Facial paralysis. Well in six months.
25	F.	10	L.	6 weeks.	Mastoid swelling; fistulous opening leading into the antrum.	" 26th.	Granulation tissue; lateral sinus covered with granulation tissue.	Cured.
26	M.	30	R.	25 years.	Recurrent polypi and repeated attacks of giddiness.	" "	Antrum deep; full of granulation tissue and cholesteatoma.	"
27	F.	17	L.	1 year.	Pain, sickness, and polypi.	May 24th.	Antrum filled with granulation tissue.	"
28	F.	13	L.	2½ years.	Semi-unconscious; head well retracted; bulging of the posterior superior meatal wall.	June 15th.	Cerebellar abscess. (Published in the <i>Journal of Laryngology</i> , October, 1899.)	"
29	F.	1½	L.	12 months.	Polypi, mastoid swelling, and necrosed bone.	" 18th.	Disease of the whole temporal bone; antrum was full of granulation tissue and cholesteatoma.	"
30	M.	9	L.	—	Mastoid swelling.	July 9th.	Mastoid cells full of pus, also antrum, and attic, with cholesteatoma.	"
31	F.	15	L.	5 years.	Pain, nausea, and giddiness.	" 19th.	Mastoid cells and antrum full of granulation tissue; lateral sinus exposed.	"
32	M.	10	R.	—	Mastoid swelling; sinus in the bone leading to the antrum.	" 26th.	Carious bone in the mastoid cells; antrum enlarged, containing pus and cholesteatoma.	"
33	M.	22	L.	—	Stenosis of the meatus, pain, and giddiness.	August 16th.	Antrum filled with pus and granulation tissue.	"
34	F.	19	L.	3 years.	Facial paralysis.	" "	Antrum full of cholesteatoma; incus was removed.	"
35	M.	18	L.	—	Delirious, rigors, swelling over the mastoid, and great pain.	" 20th.	Pus over the mastoid and in the antrum; extradural abscess.	Died August 22nd.

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION: TABULAR STATEMENT.

No.	Sex.	Age.	Ear.	Duration.	Symptoms previously to operation.	Date of operation.	Remarks.	Result.
36	M.	23	L.	3 weeks.	Mastoid swelling.	Sept. 3rd.	Full of granulation tissue filling the antrum, and also found on the lateral sinus.	Cured.
37	M.	8	L.	4 years.	Mastoid swelling, sinus in the bone leading to the antrum, and pain.	Oct. 5th.	Mastoid cells and antrum full of pus and granulation tissue.	"
38	F.	20	L.	16 "	Pain, vomiting, and giddiness.	Nov. 8th.	Antrum full of pus and cholesteatoma.	"
39	F.	15	L.	2 "	Subject to epileptic fits; no cause.	" 8th.	Small granulations and carious bone in the attic.	Cured. Fits not improved.
40	M.	8	L.	7 "	Polypi recurring, drowsiness, and pain.	" 29th.	Antrum full of large granulation tissue, also attic.	Cured.
41	F.	6	L.	3 "	Fistulous opening in the mastoid leading to the antrum.	Dec. 12th.	Mastoid cells and antrum full of granulation tissue; granulations over the lateral sinus.	"
42	M.	8	L.	2 "	Mastoid swelling.	" 17th.	Antrum full of granulation tissue and pus.	"
43	M.	8	R.	7 "	Mastoid swelling; sinus leading to the antrum.	Jan. 2nd, 1899.	Pus and granulation tissue in the mastoid cells and antrum.	"
44	F.	13	L.	2 "	Recurring polypi.	Jan. 31st.	Antrum full of cholesteatoma and lateral sinus exposed.	"
45	M.	7	L.	3 "	Pain, nausea, and giddiness.	Feb. 2nd.	Antrum very deep; granulation tissue.	"
46	F.	20	R.	17 "	Giddiness and pain.	" 21st.	Antrum full of granulation tissue.	"
47	M.	13	L.	8 "	Mastoid swelling, pain, and nausea.	" 25th.	Antrum opened, full of pus and granulation tissue.	—
						March 2nd.	Extradural abscess.	—
						" 10th.	Lateral sinus thrombosis; internal jugular vein tied.	Died March 21st. Empyema of the chest.
48	M.	19	R.	—	Mastoid swelling; fistulous opening leading to the antrum.	Feb. 28th, 1899.	Pus in the antrum and granulation tissue.	Cured.
49	M.	24	R.	—	Pain, giddiness, and nausea.	March 14th.	Antrum very deep; pus and granulation tissue.	"
50	M.	19	R.	12 years.	Recurring polypi, pain, and drowsiness.	April 11th.	Carious bone removed, antrum full of granulation tissue. Lateral sinus exposed.	"
51	F.	22	R.	10 "	Pain, giddiness, and nausea.	May 9th.	Dura mater of the middle fossa exposed; antrum full of granulation tissue.	—
52	M.	32	R.	10 "	Giddiness, pain, and nausea.	" 16th.	Antrum contained cholesteatoma.	—
53	F.	14	R.	10 "	Pain and nausea.	" 30th.	Fistulous opening into the antrum; lateral sinus completely exposed.	—
54	F.	25	L.	20 "	Had attacks of epileptic convulsions.	June 2nd.	Antrum contained granulation tissue.	Cured.
55	F.	33	R.	20 "	Depression of spirits, pain, giddiness, and nausea.	" 6th.	Antrum full of cholesteatoma.	"
56	M.	20	R.	—	Mastoid swelling, pain, and giddiness.	" 11th.	Antrum full of pus and granulation tissue; extradural abscess.	"
57	M.	29	L.	—	Pain, nausea, and giddiness.	July 18th.	Antrum and attic full of granulation tissue and cholesteatoma.	—
58	M.	23	L.	20 years.	Pain and recurrent polypi.	" 25th.	Antrum contained granulation tissue.	"
59	F.	37	R.	5 "	Pain, nausea, and giddiness.	August 1st.	Antrum and attic full of cholesteatoma.	Cured.
60	F.	32	R.	—	Facial paralysis and pain.	" 22nd.	Antrum and attic full of granulation tissue and cholesteatoma; lateral sinus was exposed.	"
61	M.	24	R.	2 years.	Pain, vomiting, giddiness, and bulging of the meatal wall.	" "	Temporo-sphenoidal abscess.	"
62	F.	15	L.	—	Swelling over the mastoid; pain.	" 29th.	Fistulous opening into the antrum, pus, and granulation tissue.	"
63	M.	40	L.	30 years.	Pain, nausea, and giddiness.	" 31st.	Antrum full of granulation tissue.	"
64	F.	16	L.	11 "	Vertigo, sickness, and pain.	Sept. 5th.	Antrum contained granulation tissue and necrosed bone.	"
65	F.	26	R.	20 "	Recurrent polypi.	" 26th.	Antrum contained granulation tissue.	"
66	M.	41	L.	11 "	Pain, papillitis, and giddiness.	" "	Antrum contained granulation tissue and cholesteatoma.	"
67	F.	16	R.	6 months.	Pain and giddiness.	Oct. 3rd.	Antrum contained a cholesteatomatous cyst.	"
68	M.	37	L.	12 years.	Pain and recurring polypi.	" "	Antrum contained granulation tissue and cholesteatoma.	"
69	F.	28	L.	18 "	Pain, nausea, and giddiness.	" 10th.	Antrum was deep and contained granulation tissue and cholesteatoma; dura mater of the middle fossa was exposed.	"
70	M.	24	L.	20 "	Pain, vertigo, and nausea.	" "	Antrum was large and contained a brown fluid and cholesteatoma; dura mater of the middle fossa was exposed.	"
71	M.	30	L.	20 "	Giddiness.	" 17th.	Antrum contained granulation tissue and cholesteatoma.	"

EIGHTY SUCCESSIVE CASES OF STACKE'S OPERATION : TABULAR STATEMENT.

No.	Sex.	Age.	Ear.	Duration.	Symptoms previously to operation.	Date of operation.	Remarks.	Result.
72	F.	29	L.	25 years.	Pain, nausea, and giddiness.	Oct. 17th.	Antrum contained granulation tissue ; dura mater of the middle fossa was exposed.	Cured.
73	M.	62	R.	4 months.	Mastoid swelling, pain, and nausea.	„ 31st.	Fistulous opening leading to the antrum full of pus and granulation tissue.	„
74	F.	29	L.	12 years.	Pain, giddiness, and nausea.	„ „	Antrum full of granulation tissue and cholesteatoma.	„
75	F.	23	L.	20 „	Pain, giddiness, and nausea.	Nov. 7th.	Antrum contained granulation tissue.	Recovery.
76	F.	30	L.	20 „	Pain, giddiness, and nausea.	„ 23rd.	Mastoid cells and antrum contained granulation tissue.	„
77	M.	13	R.	10 „	Pain, giddiness, and nausea.	„ „	Antrum very deep, contained granulation tissue.	„
78	M.	5	L.	—	Mastoid swelling and pain.	„ 28th.	Fistulous opening leading into the antrum containing granulation tissue.	„
79	M.	26	R.	14 years.	Pain, nausea, and giddiness.	„ „	Antrum was very deep and contained granulation tissue.	„
80	F.	24	L.	18 „	Pain, nausea, and giddiness.	Dec. 12th.	Antrum contained granulation tissue ; lateral sinus exposed.	„

For the notes of these cases I am indebted to my colleague, Mr. Chiehele Nourse, who has more especially followed their progress.

was affected in 19 instances, in both ears in 11, and the right ear only in two cases. In those cases in which both were affected the left ear was first attacked. His explanation of the fact is the nearer position of the left common carotid to the heart and the more direct and less impeded arterial supply to the left than to the right side of the head, this observer noting, also, that arachnoid cysts so frequent in that form of mental disease in which othæmatomata may be expected are more commonly found on the left than on the right hemisphere of the brain. The average age of the patients is between 20 and 21 years, the youngest subject being 14 months old. The average duration of the suppurative disease in those cases where it could be ascertained was 12½ years.

Turning now to the symptoms exhibited by patients before the operation, persistent suppuration of the middle-ear was present in all and pain was very commonly complained of. 39 of the patients were troubled with attacks of vertigo, in 19 there were recurrent polypi, and in 17 there was swelling over the mastoid process. Facial paralysis was present before the operation in five cases and mental disturbance was noted six times. In two cases of old-standing suppuration (Cases 39 and 54) the operation was mainly undertaken in the hope of curing the epileptic fits to which the patient had recently become subject. Though the conditions discovered proved that the operation was abundantly justified the fits showed no improvement in Case 39, but a complete cure resulted in Case 54. The original disease was complicated by septic phlebitis of the lateral sinus and the internal jugular vein in two instances and by extradural abscess in three. Cerebral abscess was found once and cerebellar abscess once. At the time of the operation dead bone was discovered and removed in seven cases. In 11 a fistulous opening led from the surface of the mastoid process to the antrum. The middle fossa of the skull was exposed six times during the operation and the groove of the lateral sinus was laid bare in some part of its course 14 times. The cerebral and cerebellar abscesses were successfully located and drained and in one fatal case the internal jugular vein was tied. In two cases facial paralysis appeared after the operation, but in both it disappeared again within nine months. Except in those patients—three in number—whose condition was almost beyond hope on admission the results of the operation were uniformly successful.

With regard to the results of this operation the mortality in my hands has been practically *nil*, for the only three deaths reported were brought into the hospital in a very advanced stage of pyæmic poisoning. In the successful cases the threatening symptoms quickly disappeared, the change from sullen stupidity to lively intelligence being very noteworthy. Occasionally a slight purulent discharge continues for some time; but owing to the freedom with which the adjacent cavities have been

placed in communication with the now very wide meatus no accumulations can possibly occur, and the whole tympanum, antrum, and attic gradually become soundly healed and can be inspected at any time by means of a speculum. In conclusion, my experience leads me to the opinion that it is safer to operate at an early period of suppurative disease, should there exist any of the enumerated indications for it, rather than wait until the processes have had time to produce signs of a more threatening character, and possibly to infect some of the intra-cranial contents.

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CONSANGUINEOUS MARRIAGE AND DEAF-MUTISM.

By ALFRED H. HUTH,

AUTHOR OF "THE MARRIAGE OF NEAR KIN."

THE question of the intermarriage of the deaf and its consequences has excited attention almost ever since deaf-mutism itself has been studied, and very various opinions have been expressed upon the subject. On the one side is the remarkable fact that frequently none of the children of deaf parents are deaf, while on the other side we have the indisputable fact that deafness is as strongly inherited as any other disease of the nervous system. In short, this is another example of the now generally accepted axiom that inheritance equals the sum of the ancestry divided by the number of the ancestors, and since there is, at present at least, no deaf race of human beings so the inheritance of deafness must be proportionately uncertain. In the absence of reliable statistics it is difficult to ascertain how far this inheritance is likely to be intensified by the intermarriage of the deaf. Such marriages are not very common in Europe. In the United States, however, where for the last half-century a great deal of attention has been paid to the education of the deaf and where consequently they have been more intimately brought together, so much intermarriage has gone on as to excite the alarm of many observers. In 1884 Dr. Graham Bell, the well-known creator of the Volta Bureau of Washington, published his "Memoir upon the Formation of a Deaf Variety of the Human Race," and now Dr. Fay comes forward with an elaborate inquiry into the result of "Marriages of the Deaf in America." By means of circulars and other investigations Dr. Fay has collected a grand total of 3078 marriages, sufficiently reported for conclusions to be