depending on the duration of the narcosis. Fluids, particularly milk, may be administered by the mouth. Restraint may be needed, but the patients are amenable to kindly yet forceful orders. Mechanical restraint of the arms may be required during the actual delivery in order to avoid a tear of the perineum or the soiling of the sterile clothes; but the perineum may be stretched and the "occiput flexed" without any added discomfort to the patient.

In view of the occasional idiosyncrasy sometimes found in using hyoscine it will be of interest to recount that while no patients were found intolerant of the drug, two patients exhibited definite hallucinations, which, curiously enough, did not appear until immediately after the delivery of the placenta. This condition gave rise to no anxiety. It disappeared with the dawn of consciousness, and all the mothers have since been normal.

Results.

The most interesting part of the whole treatment is visible when consciousness returns some two to three hours after delivery. The mothers look remarkably fit and well. There is hardly anything in their facial appearance to suggest that they have been through a labour and delivered of a child. Most remain oblivious of the fact that they possess a baby until they are informed or happen to place a hand upon the abdomen and find the contour changed. Then their smiling thanks are worth any added work entailed by the accoucheur.

Complete amnesia was obtained in 20 cases. One primigravida, who had had three injections, only remembered six pains and the birth of the baby, which was painless. One of the patients, delivered by forceps, only remembered the mask being placed upon her face. This island of memory, similar to two other small islands of memory in the two remaining cases, seemed directly attributable to a delay in giving the last injection owing to an apparently imminent birth. Experience showed that the last injection might be given in safety, even when the head was distending the perineum. In patients under the influence of this treatment the *vis a tergo* seemed purely uterine, and the final extraordinary expulsive efforts were more or less lacking and not accompanied by increased abdominal tension. This often led to a relatively slow stretching of the perineum.

The Application.

Dr. Van Hoosen gives the lengthy name of "scopolamine-narco-anaesthesia" to her treatment; but in view of the rather unique narcotic and anaesthetic effects of hyoscine I venture to suggest that the name of "hyoscine amnesia" —or "scopolamine amnesia," if you will—would be more all-embracing and suitable.

Conclusion.

It has been stressed already that the patients must be under constant supervision. Apart from the usual nursing attendance, restraint may be needed for restlessness during the pains. Extra help may be required at the time of delivery unless the patient is secured with suitable appliances, which limit the use of her hands and the tendency of her body to undo the left lateral position in which she has been placed. Against this can be placed the valuable assistance rendered by repeated kindly, simple, yet forceful orders. It is often the hefty type which causes trouble; the thin, nervous woman, for whom this treatment seems eminently suitable, rarely gives any trouble.

Advantages of Hyoscine Amnesia.

1. The treatment is simple to carry out.
2. There is a fair certainty of obtaining loss of memory of the delivery and of the worst of the labour pains.
3. There is no apparent ill effect on the child.
4. The treatment has a tendency to shorten labour as a whole.
5. There is no apparent increased tendency to the use of low forceps.
6. There is a shortening of the third stage of labour and a small loss of post-partum blood.

RESPIRATORY FAILURE DUE TO CEREBRAL ABSCESS.

BY

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AMONG the modern advances in medical science the pathology, diagnosis, and treatment of intracranial lesions occupy a high position, but the case of cerebral abscess described below presents some unusual features, and is, I think, worthy of being recorded. The following notes are taken from the case records.

H. R., male, aged 25, was admitted to Monsall Fever Hospital at 10.15 p.m. on May 2nd, 1929, certified to be suffering from meningitis. Several days previous to admission he had complained of left earache, but had continued at his occupation of fruit-market salesman. He returned from work at midday on the day of his admission complaining of severe headache and backache, and soon afterwards began to feel drowsy. When seen by his doctor he was thought to be suffering from meningitis, and was sent to Monsall Hospital.

On admission he was in a drowsy, semicomatose condition, and could be roused with difficulty, but quickly returned to his drowsy state. Both pupils reacted to light, but the left pupil was slightly smaller than the right one. There was no strabismus or nystagmus. There was slight retraction of the head and marked nuchal rigidity. The tongue was dry and furred, but the throat was clean. No rhinorrhoea or otorrhoea was present, and no tenderness was elicited over the mastoid processes. Kernig's and Babinski's signs were present. No albumin or sugar was found in the urine. Examination of the heart, lungs, and abdomen revealed no lesion. Temperature 100.2°, pulse 100, respirations 28.

May 3rd. Patient was drowsy; there was no delirium or irritability; he could be roused sufficiently to answer questions rationally, but only after a definite latent period; complained of suboccipital pain; pupils normal and reacted to light; no strabismus or nystagmus; no otorrhoea; Kernig's and Babinski's signs present; temperature 101°, pulse 104, respirations 23. Under local anaesthesia lumbar puncture was performed. The cerebro-spinal fluid was under pressure, and 40 c.cm. of slightly turbid fluid were withdrawn. Examination revealed numerous polymorphonuclear leucocytes, but no organisms were found in stained films, and cultures on blood agar yielded no growth.

May 4th. Patient not so drowsy and nuchal rigidity not so marked; complained of severe frontal headache; herpes of upper lip and pinna of right ear; temperature 98.6°, pulse 68, respirations 20.

May 5th. Condition unchanged; no evidence of aural lesion; headache continued; temperature 99.4°, pulse 76, respirations 20.

May 6th. Severe frontal and suboccipital headache; no head retraction, but definite rigidity of neck muscles; slightly drowsy; no incontinence; pupils normal; no mastoid tenderness, but slight reaction to hydrogen peroxide in right ear; temperature 99.6°, pulse 56, respirations 22. Lumbar puncture was repeated, the cerebro-spinal fluid was not under pressure, and 15 c.cm. were withdrawn. The fluid showed very slight turbidity, but no organisms were found, despite the continued presence of polymorphonuclear leucocytes. The visiting aural surgeon was asked to examine this case, and he reported as follows: "Both tympanic membranes opaque, but no pus in either and no bulging. No indication of aural cause for meningeal condition." The following day the condition was unchanged; temperature 100°, pulse 56, respirations 20.

May 8th. General condition showed slight improvement; temperature 98°, pulse 52, respirations 24. On May 9th the nuchal rigidity and headache were less; he was rational in conversation, but not taking much interest in his surroundings; there was no paralysis or paresis; pulse still slow; temperature 97.8°, pulse 52, respirations 20.

May 10th. At 10 a.m. I arrived at the ward in response to an urgent call to find the patient unconscious and cyanosed. Respiration had ceased, but the heart was beating regularly, though slowly. There was general spasticity of the muscles, but no twitching; both pupils were fixed, the right contracted and the left widely dilated; there was no strabismus, no nystagmus, and the superficial reflexes were absent. A gag having been inserted into the mouth artificial respiration was begun and the cyanosis rapidly disappeared. Strychnine and pituitrin were administered hypodermically. Gradually the limbs became flaccid, and both pupils were now dilated and fixed. Artificial respiration was maintained, but no attempt at natural respiration occurred, though the heart's action continued to be regular and forceful. While a careful watch was kept on the condition of the heart, artificial respiration was discontinued till the patient was "black in the face," but artificial respiration had to be started again. At the end of one hour the condition was unchanged. Cistern puncture

was performed, but the cerebro-spinal fluid was not under pressure, and only a few drops of clear fluid were withdrawn. No alteration in the condition followed this procedure. Despite the continued artificial respiration, an earthy cyanosis now appeared, both pupils were dilated and fixed, and the extremities cold and clammy. At 3 p.m. the heart began to lose tone, gradually became irregular, and, despite energetic stimulation, death occurred at 4 p.m. (six hours after cessation of respiration).

A post-mortem examination was performed on May 11th, and the following notes are extracted from the report.

"Brain: no evidence of meningitis; circumscribed abscess about the size of a walnut in left temporo-sphenoidal lobe; abscess cavity contained thick greenish pus with foul odour; abscess situated completely in the white matter, but a visible track led through the grey matter to the petrous portion of the left temporal bone; the white matter round the abscess for a variable distance showed marked softening, with scattered minute haemorrhages; ventricles not distended, and contained no pus; no cerebellar or pontine lesion.

"Left temporal bone: tegmen tympani discoloured and eroded; middle ear and mastoid antrum full of partially organized granulations; the mastoid process showed marked sclerosis of the bone, and the scanty air cells were filled with granulations; lateral sinus not involved; no evidence of spread of infection to cerebellar fossa; membrana tympani thickened but intact.

"Stained films of the pus showed numerous pus cells, Gram-positive and Gram-negative diplococci, Gram-negative bacilli, and short chains of streptococci. Films of the growth on blood agar plates revealed similar organisms; the streptococci were non-haemolytic."

The cessation of respiration must have been sudden in onset as the ward sister had conversed with the patient shortly before she discovered him in this state, and none of the other patients in the ward was aware of any change in his condition.

With the assistance of the family practitioner I made more detailed inquiry into the previous history of this case. On or about April 15th he had complained of earache,

and had attended the Ear Hospital, where he was given some drops to instil into the ear. The condition apparently subsided, and he was in good health till the day of his admission to hospital. His wife reported that she had heard him say that he had "always been slightly deaf." The marked sclerosis of the mastoid process and its incomplete pneumatization suggest that the aural lesion was of longer standing than the history would suggest. No history of vomiting, vertigo, dimness of vision, diplopia, or even headache could be obtained. The necropsy findings point to the abscess being of some duration, and that the terminal condition was due to extension into the surrounding cerebral tissue.

Ransom¹ states that the respiratory centre is situated in the caudal part of the medulla oblongata. Landois and Stirling² discuss the question of an additional cerebral respiratory centre, but modern physiologists agree in placing the respiratory centre in the medulla oblongata. The work of Lumsden³ shows that the mid-brain has no influence on respiration. On anatomical grounds the cessation of respiration in this case does not seem to have been due to pressure on the centre. Four days had elapsed since the last withdrawal of cerebro-spinal fluid.

Macewen⁴ and others have described cases of cerebellar abscess causing pressure on the pons and cessation of respiration, but I have been unable to find any references to a similar condition occurring in a case of cerebral abscess.

I wish to express my thanks to Dr. D. Sage Sutherland, medical superintendent, for permission to publish this case.

REFERENCES.

- ¹ Ransom, W. S.: *The Anatomy of the Nervous System*, 1925, p. 330.
- ² Landois and Stirling: *A Textbook of Human Physiology*, 1891, vol. ii, p. 815.
- ³ Lumsden: *Journal of Physiology*, 1923, 57, pp. 153 and 354.
- ⁴ Macewen, W.: *Pyogenic Infective Diseases of the Brain and Spinal Cord*, pp. 137 and 196.

NASAL DISCHARGE IN CHILDHOOD.*

BY

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For the purpose of this communication 50 children, under 14 years of age, have been selected; these, when first seen, had one symptom common to all—nasal discharge. The children have been kept under observation, with few exceptions, for two years or longer. The fifty children may be classified as follows.

Fifty Cases of Nasal Discharge.

	Cases.
A. Tonsils and adenoids previously removed; maxillary antrum infection present	23 (16)
B. Maxillary antrum infection present; no operation on throat previously; adenoids not present	9 (1)
C. Tonsils and adenoids removed; antral investigation negative; nasal discharge persisting ...	10 (8)
D. Required second or third operation on tonsils and adenoids to terminate nasal discharge ...	6 (4)
E. Atrophic rhinitis	2

The figures in parentheses indicate the number of cases in which otorrhoea or deafness was a symptom: 29 such cases are noted, or 58 per cent. of all cases. It is only fair to add that many of these cases came under my

notice primarily for the relief of aural disease. Sinus infection was present in 32 patients, or 64 per cent. of cases, as shown in the table.

CLASS A.

In these cases nasal discharge had persisted despite an efficient removal of tonsils and adenoids. Cleminson, in 1921, put forward as a cause of the lack of attention paid to the sinuses in young children the great similarity between the clinical picture produced by sinus disease and that painted in almost every textbook as due to adenoid hypertrophy. Both conditions may give rise to the running nose, and probably in the 23 cases in this group the tonsils and adenoids had been removed with a view to the relief of this symptom among others. When first seen by me nasal discharge was present, and unilateral or bilateral antral infection was demonstrated by proof puncture. The presence of pus or muco-pus in the suction syringe or wash-out was the only positive criterion of infection accepted. In the majority of children I perform proof puncture of the antrum with a fine, straight trocar and cannula through the inferior meatus of the nose, having first inserted a probe covered with cotton-wool in 5 per cent. cocaine with adrenaline on to the selected spot for perforation of the antral wall. I have had no trouble from the cocaine. I would like to ask the question, Was it unnecessary in the first place to have advised the throat operation? Probably it was not, as, in my experience, the presence of an obstructed or septic nasopharynx is a hindrance to the cure of an infected sinus; for, as

* A communication to the Section of Oto-Rhino-Laryngology at the Annual Meeting of the British Medical Association, Manchester, 1929.