

(2) After the attacks have ceased.

(a) One's standby is plain water, as much as the patient can drink, the more the better.

(b) Salines by the rectum as much as can be retained.

(c) If after 2 or 3 days there is no recurrence of fits, one may begin by giving the case small quantities of vegetables, white vegetable being preferable.

(d) Milk and meat should not be given until the urine is normal and all signs of poisoning gone, then one can commence on small quantities of milk well diluted and later on tea, thin bread and butter, etc., and gradually work the case back to normal diet.

It is, however, most important to adhere strictly to a plain water diet in the first instance. Too much emphasis cannot be laid on this point.

As regards the puerperium, it is worth remembering that the breast pump should be used twice a day and that under no circumstances should the case be allowed to nurse her baby until at least one week after the last fit.

ANOCOCI-ASSOCIATION AND CANCER OF THE CHEEK.

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OPERATIONS on the face are always troublesome and difficult both to the operator and the anæsthetist. Cancer of the cheek and jaws, probably connected with the almost universal habit of chewing betel and tobacco, is unfortunately extremely common in the Madras Presidency. Though apparently benign in its early stages, and remaining so far a long period, it sooner or later takes on a rapidly malignant growth, and is rarely seen in the stage when a small operation will suffice for a cure. Only three cases were seen in the very early stage during the year and they indignantly refused to undergo any operation.

The cases reported below have all been taken from the female surgical wards of the General Hospital, Madras, of which I have been in charge. Madras women stand operations of the face and jaws very badly and the operation mortality is much higher than with the men. Probably this is due to the fact that they come to hospital much later and are so often in a half starved and asthenic condition. The mortality of operations for removal of the lower jaw in these wards was 48 per cent. in 1912, in fact, the dangers of operation have been recognised as being so severe that formerly only picked cases have been operated on. The fatal result has nearly always been due to shock and the result of a few

operations performed during the past year seems to show that something can be done for these unfortunates by operation if this severe danger from shock can be overcome.

Anococi-association is now a recognised method in surgery, thanks to the work of Crile, and the value of his methods in abolishing nocuous impulses to the brain is obvious to all who had seen operations with local anæsthesia. Unfortunately nitrous oxide and oxygen is not available as an anæsthetic in South India, but a paper in the *Medical Annual* of 1912 on local anæsthesia, led me to try a combination of chloroform with injection of novocaine into the Gasserian ganglion. Of course, some of these operations might be done under local anæsthesia alone, but such a course adds to one's difficulties and does not abolish the mental element which Crile shows exerts a considerable effect in the production of shock and of changes in the brain cells.

Method—The method of injection used was pointed out to me by Lt.-Col. Foulkes, I.M.S., and is illustrated by the photographs kindly taken by Captain Fraser, I.M.S. An ordinary exploring syringe, with a needle of three to four inches in length, does very well for the injection, and a measurement taken from the outer margin of the orbit to the external auditory meatus gives roughly the distance which the needle will traverse to reach the foramen ovale. The solution used, of which about two drachms are generally injected, is one containing 1 per cent. novocaine and 15 per cent. of adrenalin (1 in 1,000) solution.

The patient is first anæsthetised, preferably before being brought to the operation theatre. The injection is then made, to perform which the notch on the under surface of the zygomatic process of the superior maxilla is palpated, *i.e.*, just internal to the articulation of the maxilla with the malar bone. Immediately below this notch the needle is plunged boldly in a direction towards the apex of the orbit and will be felt to strike against a plate of bone which is the under surface of the great wing of the sphenoid. The point is then lowered and can be felt to slip over the edge of this plate of bone and into the foramen ovale. The injection is made, as the needle is gently withdrawn. In a few cases with enlargement of cervical glands injections of novocaine were made in the region of the superficial cervical nerves. Following the injection laryngotomy is performed and after plugging the pharynx the operation is proceeded with under fairly light anæsthesia.

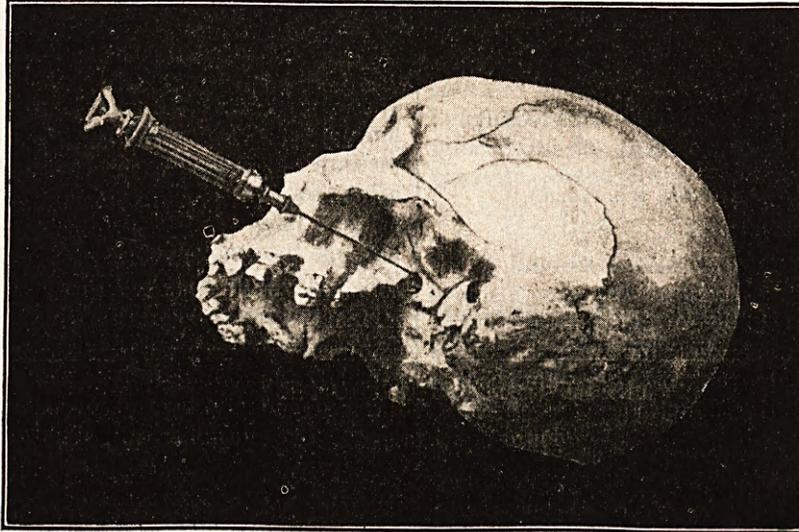
With the above method it is surprising how good the pulse is at the end of a long and severe operation, in several cases with patients on whom an operation was performed with considerable misgiving. Unfortunately with nearly all these

patients there occurs a marked fall in blood pressure and signs of shock about three to five hours after the operation when the action of the novocaine has passed off. The ward nurse first called my attention to this and in the patients whose pulse has been recorded every hour after the operation, it is remarkable how in each case it becomes rapid after practically the same interval, generally going up to 120 to 130. This shock is, however, as nothing compared with what one associated before with operations on the lower jaw, and is generally easily combated. The patient who died had quite a good pulse and had recovered from the anæsthetic, but collapsed suddenly about four hours after operation and never rallied properly.

I have not ventured to try the urea and quinine preparation for these cases on account of the œdema and swelling it causes. A monkey

anæsthesia. For this reason the results among male patients are not reported, as the mortality of operation among them is not nearly so high.

1. *Operable Cases.*—Here there is a good hope of final success and removal has been as wide as possible. Where removal of the lower jaw was necessary it gave one a much easier field of operation and shewed the growth in two cases to be extending further back towards the fauces than suspected before operation. Of course, wherever possible the jaw is saved as removal causes so much deformity. In one case a new cheek was devised by taking a flap of skin and subcutaneous tissue from the neck, turning it upwards and sewing skin to mucous membrane. The skin surface, which faced inwards, made an excellent mucous membrane, but another case, in whom a similar flap was taken from the forehead, did not do so well on account of a few hairs which



whose ganglion was injected with this preparation showed no ill-effects, but it was difficult to decide whether the animal really remained anæsthetic afterwards. Microscopical examination of the ganglion at a later date showed no changes had occurred in it.

As regards final results, it is impossible to say whether these patients were really cured or not, as one rarely sees Indian patients after they are discharged from hospital. There was, however, a fair hope of success in some and the freedom from distress and pain was marked in all. For convenience of description the cases are divided into (1) operable cases, (2) palliative operation cases, and (3) very advanced cases. The small number of cases reported does not warrant one in suggesting any definite line of treatment and this report is only made to shew the value of local anæsthesia in addition to general

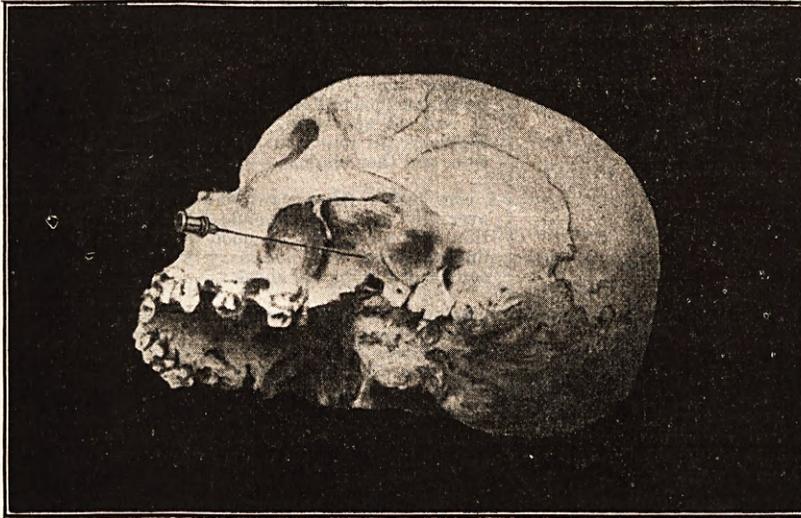
irritated the mouth and were difficult to pull out.

2. *Palliative Operation Cases.*—A recent writer in the *Lancet* has pointed out the unsuitability of the definition, inoperable cases, shewing that it is often still possible to relieve by operation patients for whom a complete cure is impossible. The argument advanced against operation for these patients is that the disease will return and the distress be as great as ever in a short time, while in India unless one can cure a patient one's aims are apt to be very misunderstood. However the condition of patients with a fungating cancer of the cheek or jaw is distressing in the extreme, with the mouth full of pus and foetid discharge and sleep and food impossible, so that one is often tempted to accede to the patient's entreaties and to attempt too much.

Cases 4 and 5 are examples of the value of operation in so-called inoperable cases. In the patient with a fungating growth of the orbit, operation was only undertaken at the patient's urgent request and with great misgiving. The result was most gratifying, for though there was a small recurrence at the apex of the orbit at the

more difficult to make them understand that the operation can only relieve and not cure.

3. *Advanced Cases.*—In several of these cases considerable relief has been gained by an injection of alcohol into the gasserian ganglion and by removing all the teeth of the affected side. Here, of course, the injection is useless



end of three months, the patient had put on weight and was quite free from pain. In patient No. 5, a cancer of the cheek was widely removed and no attempt made to repair the hole left in the face. Recurrence had taken place at the end of three months, but the discharges could escape easily from the mouth and there was little or no pain, the patient, who was watched in hospital, sleeping well every night. Those patients are difficult to pick and it is still

where the pain is not distributed over the area of the trigeminal nerve.

TABULATED CASES.

In all the cases detailed below a preliminary injection into the gasserian ganglion was given and a laryngotomy performed. The result can only be given up to the date when they left hospital on account of the impossibility of tracing these patients to their houses.

Diagnosis.	Operation.	Remarks.	Result.
1. Sarcoma lower jaw (mainly spindle cells with a few mixed cells.)	Excision of left lower jaw	Practically no shock followed the operation though the patient was a young girl and poorly nourished.	After 2½ months. No signs of growth, wound healed and the patient had put on weight since the operation.
2. Epithelioma cheek	Partial excision of right lower jaw (being 1st molar tooth) and cheek.	No shock. The gap in the cheek was filled by taking a flap from the neck, turning this upwards, skin surface inwards and sewing skin to mucous membrane.	No sign of growth. The skin surface inside the cheek was functioning well as mucous membrane, and the patient taking full rice diet in comfort.
3. Epithelioma tongue	Partial excision (intra-buccal.)	Ganglion not injected, novocaine injected with a hypodermic deeply into base of tongue. No shock.	Seen later with recurrence.
4. Carcinoma of lacrymal gland.	Extirpation of orbit, together with removal of outer orbital wall and partial excision of maxilla.	This patient had a large fungating growth, involving the eye, the outer wall and floor of the orbit. She was in great pain and implored us to do something. The outer wall was removed to the sphenoidal fissure and the whole of the floor exposing the mucous membrane of the antrum. There was no shock, and the patient's condition never gave rise to any anxiety.	When seen three months after operation, there was apparently a small recurrence at the apex of the orbit. The surface had been skin-grafted, and the patient was remarkably free from pain and had gained in weight.

Diagnosis.	Operation.	Remarks.	Result.
5. Epithelioma cheek	Excision of left lower jaw and cheek.	There was a good deal of shock about four hours after operation. Jaw, cheek and contents of sub-maxillary triangle removed in one piece.	An inoperable case, but there was great relief from pain and sleeplessness following operation.
6. Epithelioma cheek	Excision of lower jaw & cheek.	Sub-maxillary triangle cleaned. No shock.	No sign of recurrence growth on discharge and patient comfortable.
7. Epithelioma cheek	Excision of lower jaw & cheek.	No shock. Pulse 86 and of good tension at end of operation, which included cleaning sub-maxillary triangle.	No sign of growth. No pain, or sleeplessness.
8. Epithelioma cheek	Excision of lower jaw and cheek.	Excision included anterior pillar of fauces and part of soft palate. Pulse at end of operation, 70 and good. No shock till four hours after operation, and then slight.	No sign of growth. No pain or sleeplessness.
9. Epithelioma lower lip.	Excision	A very feeble old woman, who looked over 70. Pulse 74 at end of operation and no shock. A good deal of undercutting was necessary to reconstruct the lip and cheek.	No sign of growth when discharged.
10. Epithelioma cheek	Excision of jaw and cheek	A feeble old patient, excision included sub-maxillary triangle, tonsil and both pillars of fauces. Pulse before operation 66, at completion 68 and good tension. She suddenly collapsed about four hours after operation.	Died, 30 hours after operation.
11. Epithelioma cheek	Excision	Necessitated a good deal of undercutting to reconstruct the cheek. A feeble old patient, but had good pulse, 120 at end of operation. Excision was wide.	No pain and no sign of growth when discharged.

A Mirror of Hospital Practice.

AN ANALYSIS OF 77 CASES OF PLACENTA PRÆVIA AT THE GOVERNMENT MATERNITY HOSPITAL, MADRAS.

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THE 77 cases of Placenta Prævia were delivered at the Government Maternity Hospital from the year 1903 to 1912.

During these 10 years there were 20,058 labour cases admitted and delivered.

The following is an analysis of the 77 cases :—
Number of Placenta Prævia cases, 77, labour cases admitted, 20,058, Indians, 16,314, European and Eurasians, 3,744.

Indians, 58, Europeans and Eurasians, 19. Total, 77 cases of Placenta Prævia—

No. of Cases	...	1	6	3	2	2	11	9	6	7	1	12	2
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Ages of patients, years	...	16	18	20	21	22	24	25	26	28	29	30	32
		2	3	4	1	1	3	1					=77

	...	33	34	35	36	37	40	42
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No. of cases	...	9	9	12	11	5	9	5	5	4	4	3	1	=77
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Pregnancy in which they occurred.	1	2	3	4	5	6	7	8	9	10	11	12
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Kind.—Central, 16 ; Marginal, 45 ; Lateral, 16. Total, 77.

Severe Hæmorrhage occurred in all types.

Presentations.—63 Head, 5 Breach, 9 Transverse—

Head Presentation	{	36 Marginal Placenta cases.
		13 Central " "
		14 Lateral " "
Breach	...	{ 4 Marginal cases.
		1 Lateral.
Transverse	...	{ 5 Marginal.
		3 Central.
		1 Lateral.

In the seventh month 27 children were born, 25 in the 8th, 25 in the 9th.

Children born alive, 23—Born dead, 54. 14 children left hospital alive.

Of the 23 children born alive, 14 were alive and well when the mother left the hospital.

Nine died in hospital during the first six days following delivery.

Of the 23 children born alive the placenta was—
marginal in 17 cases,
central in 1 case,
lateral in 5 cases.

Of the 14 children which survived six days, the placenta was—

marginal in 9 cases,
lateral in 5 cases.

Of the 14 alive and well, 7 were Europeans, 7 Indians.

Of the 7 Europeans—

Weight of children	...	4-3	7½	5	7	8	7¼	5 lbs
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Pregnancy	...	3	10	3	6	1	3	8
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Month of Pregnancy	7	9	9	9	9	9	8
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Of the 7 Indians, weight of children	...	7	5	3-8	6	7	7	5-7 lbs.
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Pregnancy	...	9	4	1	7	6	3	3
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Month of pregnancy	...	9	9	8	9	9	9	9
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