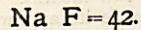


Characters.—It crystallizes from an aqueous solution in colorless cubes, often lengthened into prisms, or exhibiting square pyramidal excavated faces. It fuses below a red heat. Alkaline to reaction. Sharp saline taste. Deliquesces rapidly in the air. Can be kept in stoppered bottles for a long time without attacking the glass. Dissolves in water with rise of temperature and preserving alkaline reaction. Solution dims glass. Insoluble in alcohol. From a concentrated aqueous solution it is precipitated by strong alcohol as long thread-like crystals containing 39·44 per cent. of water.

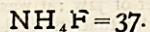
SODIUM FLUORIDE.



Preparation.—Same as potassium fluoride (q. v.), substituting caustic soda for liq. potassæ.

Characters.—It crystallizes in cubes and octahedrons, which are clear, opalescent or of a pearly lustre. It decrepitates in the fire. Taste is less sharp than that of the potassium salt. Dissolves very slowly in cold water—23 parts of water at 16° C. slowly dissolve one part at most; and no more even with aid of heat. The solution when evaporated, yields crystals of the fluoride. Alcohol takes up a very little of the salt (Berzelius *pogg.* 113).

AMMONIUM FLUORIDE.

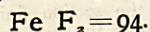


Preparation.—By saturating a solution of hydrofluoric acid with ammonia, and leaving the mixture to evaporate over quick lime.

Characters.—It crystallizes in thin hexagonal laminae or very brittle hollow hexagonal prisms. Deliquescent. Exposed to air in contact with water it evolves ammonia even at ordinary temperatures, and is converted into the acid salt NH_4HF_2 which forms deliquescent rhomboid crystals. It attacks glass even when the ammonia is in excess. A solution of the salt may be used to etch glass. It dissolves readily in water, sparingly in alcohol.

FERROUS FLUORIDE.

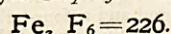
(Syn. *Proto-fluoride.*)



Preparation, &c.—By dissolving iron wire in warm aqueous hydrofluoric acid and evaporating. It forms white rectangular tables which turn pale yellow in air. Dissolves in water,—more easily in water containing hydrofluoric acid. Its strong watery solution may be kept in glass bottles for a long time without attacking the glass. Alkalies precipitate hydrated ferrous oxide from the solution.

FERRIC FLUORIDE.

(Syn. *Sesqui-fluoride.*)



Preparation, &c.—By saturating aqueous hydrofluoric acid with hydrated ferric oxide and evaporating. It forms pale flesh-colored crystals with a sweet and rough taste. Dissolves slowly in water, forming a colorless liquid.

ORGANIC FLUORIDES.

QUINETUM FLUORIDE.—Prepared by Dr. Warden from Cinchona febrifuge *by precipitation with an alkali, then dissolving the washed precipitate in hydrofluoric acid, and crystallizing out by spontaneous evaporation. It is of a pale fawn colour, confusedly crystalline in form. Taste bitter. Is sparingly soluble in water; more readily so in water acidulated with hydrofluoric acid.

(To be continued.)

A MIRROR OF HOSPITAL PRACTICE.

ON THE USE OF JABORANDI AND PILOCARPINE IN FEVER.

BY SURGEON G. A. HARRIS,

Offg. 2nd Resident Surgeon, Calcutta General Hospital.

WITH reference to a communication from Dr. Griffiths in the *Indian Medical Gazette* for December, on the use of Pilocarpine for the "ordinary fever of natives," as no other medical officer has given his opinion and experience, I wish to state my experience of that drug. I have used the Jaborandi leaves, tincture, and the alkaloid Pilocarpine ever since the spring of 1880 not only in simple uncomplicated fever among both Europeans and natives, but in a great variety of febrile conditions, such as pneumonia, erysipelas, enteric fever, &c. I have usually used the alkaloid hypodermically, and have been best satisfied with these drugs in simple uncomplicated fever where the free diaphoresis induced certainly gives relief; I now frequently use in mildague a hot infusion of tea in which 8—12 of the large Jaborandi leaves have been soaking some time. In some cases I have seen much salivation and depression follow the injection of $\frac{1}{6}$ grain of Pilocarpine, the latter condition requiring free stimulation, and have heard that in a friend's practice in England obstinate vomiting and nearly collapsed condition followed the injection of $\frac{1}{8}$ grain of Pilocarpine. Again I have seen $\frac{1}{2}$ and $\frac{3}{4}$ grains subcutaneously injected only produce slight moisture about the face and palms, lasting a very short time. During the last six months I have used the three drugs at the General Hospital in about 100 cases, in which a pyrexial condition existed, and on the whole must confess the results have not come up to the expectations formed from previous experiments, and though I still continue to use them occasionally, I infinitely prefer as diaphoretic and antipyretic remedies the salicylates and aconite for severe cases, and in simple uncomplicated cases the simple old-fashioned emetic (I am very fond of giving 20—30 grains of sulphate of copper), which will generally produce free diaphoresis, and relieve the very disagreeable headache. Latterly I have used a combination of Quinine and Pilocarpine as a subcutaneous injection, commencing with 5 grains of the former and with $\frac{1}{6}$ th grain of the latter, and have had fairly good results; but there are well known objections to the hypodermic injection of quinine, and therefore one would avoid its use thus if possible. Personally I prefer using the hot infusion of Jaborandi leaves to the tincture and the hypodermic injection of pilocarpine, as the results I think are better. It must be remembered that according to Jarnock and Meyer, though the presence of the 2nd alkaloid is denied by some good English pharmacists such as Gerrard and Martindale, both of London, there is a 2nd alkaloid in Jaborandi leaves which they termed "Jaborine," and the properties of which they say are distinct from those of pilocarpine. Possibly owing to difficulty in separation, ordinarily the two alkaloids are sometimes used mixed as "pilocarpine," and sometimes pure pilocarpine used, and thus contradictory results obtained. The action of the drug appears to be on the peripheral secreting apparatus, and not on the nerve centres, except in so

*Quinetum—the well-known 'Cinchona febrifuge,' it is to be remembered, represents the whole of the alkaloids of the *Cinchona succirubra* bark, the proportions being approximately as follows:—

Quinine	...	...	4½ to 6	per cent.
Cinchonidine	...	...	24	,, 30
Cinchonine	...	...	38	,, 45
Amorphous alkaloid	...	...	14	,, 21

far as there may be slight action on the vaso-motor nerves allowing dilatation of the vessels and freer access to the sweat glands.* In a few cases of phthisical night-sweating I tried pilocarpine injections as recommended by Dr. Murrell of the Westminster Hospital, and Dr. Ringer in his Hand-book of Therapeutics, but with no definite results.†

I hope Dr. Griffiths, when he has obtained a sufficiently large number of cases with definite results, will communicate full details of success or otherwise.

The pilocarpine I think I paid annas eight a grain for; Tincture of Jaborandi, and Jaborandi leaves are cheap enough. I hope Dr. Griffiths will try them and tell us the results.

General Hospital Calcutta,
30th January, 1883.

A CASE OF TETANUS: RECOVERY.

By G. D. MCREDIE, M.D.,

Civil Surgeon, Pertabgarh.

A HINDU lady aged 30, 13 days after delivery of her 7th child, complained of pain and stiffness of the jaws; these symptoms became aggravated, and on the 4th day, on 1st January, 1883, she came under treatment; labor was said to have been tedious and the lochia more excessive than after her previous confinements. All the symptoms of tetanus were now well marked—lock-jaw, tonic contraction of muscles of limbs; the mouth could not be opened more than $\frac{1}{2}$ an inch, liquids only could be taken; bowels costive. Abdominal muscles soft.

1st January.—Pot. Bromid. gr. 30 every 4 hours. Food—milk and soup.

2nd.—Bromide to be continued, and Ext. Physostigmæ gr. $\frac{1}{6}$, Extract Belladonnae gr. $\frac{1}{4}$; one pill at night.

3rd.—Treatment continued.

4th—Contraction of muscles of limbs more distressing, with opisthotonus.

Chloral	...	...	grs.	60.
Pot. Bromid.	...	...	"	12.
Aquaæ	...	...	"	iv.

3i every two hours.

Chloroform and opium liniment to painful parts. Mixture was continued to 7th; she had a dose of Pulp. Rhei. Co. on 7th. On the 8th the mixture of Pot. Bromid. only was resumed, but on the afternoon of this day all symptoms became aggravated—following given:

Ext. Belladonnae	...	...	gr. ii.	
Spt. Ammon. Aromatic	...	...	"	40.
Aquaæ	...	...	"	iv.

3i every 4 hours.

On the 9th as the bowels were costive, a dose of Pulp. Rhei. Co. was given. On 10th, 11th, and 12th the Belladonna mixture was continued. The tetanoid contractions were now much relieved, and the jaws could be separated a little more, the patient seemed on the whole better, but diarrhoea set in—stools copious, watery, bile-stained; these symptoms caused great exhaustion, and a fatal termination was feared. She was now ordered

Quinine	...	...	grs.	12.
Tinct. of opium	...	...	"	20.
Brandy	...	...	"	i.
Water	...	...	"	iv.

1 oz. every 4 hours.

The treatment checked the diarrhoea and enabled her to regain strength. The mixture was continued to the 20th January, 1883, when quinine only was given with port wine in $\frac{1}{2}$ oz. doses, 3 or 4 times a day. On the 20th the parotid gland on the left side became swollen and painful; suppuration took place, and the abscess was opened on 23rd January, 1883. A second opening had to be made on 4th February. No medicine was now given, but port wine with as much nourishing food, milk and soup as could be taken were steadily continued. By the 7th she was fairly convalescent. I attribute recovery in this case more to food and stimulants than to the sedatives, though the latter

* Vide Proceedings International Scientific Congress, a paper by W. Squire, M. D., London, 1881.

† I would recommend the perusal of Dr. Ringer's article on Pilocarpine to all interested in the subject, and the various papers by Dr. Murrell on the subject which have appeared in the medical journals.

no doubt controlled the abnormal muscular action and enabled nourishment to be taken.

Pertabgarh,
28th February, 1883.

REMOVAL OF RIGHT SIDE OF LOWER JAW FOR CYSTIC TUMOUR.

REPORTED BY STUDENT GEO. H. BAREFOOT,

Clinical Clerk, General Hospital, Madras.

SYED AHMED, a Mahomedan, age 21 years, a resident of Madras, of no occupation, was admitted into the General Hospital on the 1st January, 1883, under the care of Surgeon-Major R. W. Cockerill, with a swelling on the right side of his face.

Previous history.—Patient had enjoyed good health till about one year ago, when he was attacked with rheumatism, which, on the administration of some native remedies, was cured after a lapse of two months. A month after this a small nodulated lump made its appearance between the first and second molars on the right side of lower jaw; the swelling was freely movable, and was attended with some degree of pain; the growth for the first four months was very slow, and was accompanied by frequent attacks of fever at irregular intervals; during the last five months it has been very rapid, and greatly interfered with the patient's masticating on the affected side. Gives no family history of tumours.

Condition on admission.—Patient was a spare-built man, rather well nourished; pulse full and regular, skin soft and moist, tongue clean, bowels regular, area of hepatic and splenic dulness normal. There was a large swelling on the right side of his face, which was firmly attached at its base, the skin over the part was freely movable; the tumour was about the size of a small orange, oval in shape, extending longitudinally from the last molar to the second incisor tooth on the right side of lower jaw, and laterally from a little above the inferior border of malar bone to the lower border of jaw; it was hard to the touch and painless, deep-seated fluctuation could be detected only in some places; the first and second molars were pressed inwards. The external carotid artery could be traced to the outer margin of the tumour. The facial could be felt pulsating at its inner side; no lymphatic glands seemed to be in any way involved.

Operation.—Extrication of the right half of the lower jaw was performed under chloroform on the 6th January, 1883.

After the face was shaved and washed with weak carbolic lotion, the second incisor tooth of the right side was drawn, the point of a strong scalpel was inserted behind the articulation, and carried down the posterior margin of the ramus behind the angle and beyond the anterior limits of the tumour; here the incision began to slope upwards and terminated at about $\frac{3}{4}$ inch from the lips. The knife was then cautiously run along the inner side of the jaw, so as to detach the mucous membrane as much as possible; the haemorrhage was profuse, the bleeding from the facial artery being particularly forcible, but was soon stopped by the twisting of its ends. A saw was then applied *in situ* of second incisor tooth, which had been previously extracted, and the section finished by means of the cutting pliers; the edge of the knife was then kept close to the bone and tumour, when the soft structures under and around it were dissected; the tumour and ramus being cleared, an assistant forcibly depressed the body of the bone, when the attachment of the temporal muscle to the coronoid process was divided; the joint was opened from the front, the bone being well depressed and twisted somewhat outwards; the edge of the knife was kept very close to the neck in order to avoid wounding the internal maxillary artery, the remaining attachments were cut through and the part removed; the submaxillary gland being somewhat injured in the operation, was removed, also the lower portion of the parotid. There was some bleeding from the dental and also from the lingual, the latter had to be ligatured. The edges of the wound were brought together by twelve silver wire sutures, a piece of dry lint placed over the wound and a four-tailed bandage applied.

Subsequent progress.—In the evening his temperature went up to $100^{\circ}6$, respiration 22, pulse 90: was rather restless during the day; there was a very slight oozing from the wound; his diet consisting of milk, mutton broth, arrack, ice, was given by enema every second hour with 3ss. of Tinctura opii. On the 7th his temperature was $99^{\circ}6$, pulse 84; slept only at intervals during the night; the wound was dressed and the mouth syringed